

APPENDIX B – INTERCHANGE OPTIONS CONSIDERED

The development of alternatives considered a number of different interchange configurations for existing and planned interchange locations along I-15. Table B-1 summarizes the interchange location and configuration and the status of the interchange type.

Tab B-1 contains Figures B-1 through B-20. These figures illustrate UDOT's preferred interchange type for each location.

Tab B-2 contains Figures B-21 through B-38. These illustrate the alternative interchange configurations considered but not advanced into the DEIS for further evaluation.

Table B-1: Summary and Status of Interchange Configurations Evaluated

Interchange Location and Option	Status and Reason for Elimination
South Payson Interchange (Exit 248)	
Option 1 - Diamond	Advanced for further consideration
Option 2 - Realigned Diamond	Eliminated - alignment is not compatible with City's Transportation Plan
Option 3 - Realigned Diamond	Eliminated - alignment is not compatible with City's Transportation Plan
Option 4 - Realigned Diamond	Eliminated - alignment is not compatible with City's Transportation Plan
Option 5 - SPUI	Eliminated - higher costs and does not adequately address access into businesses located in northwest quadrant
North Payson Interchange (Exit 250)	
Option 1 - Diamond (Existing Main Street Alignment)	Eliminated - does not adequately address access problems at Flying J
Option 2 - Realigned SPUI	Eliminated - higher costs and impacts to businesses
Option 3 - Realigned Diamond	Advanced for further consideration
Option 4 - Realigned Diamond (Skewed Main Street Alignment)	Eliminated - does not adequately address access problems at Flying J
Option 5 - Realigned Diamond (Realigned Main Street)	Eliminated - does not provide continuity to traffic patterns along Main Street
SR-164 Benjamin Interchange (Exit 253)	
Option 1 - Diamond	Eliminated - does not adequately address safety issues related to existing at-grade railroad crossing; undesirable skew
Option 2 - Realigned Diamond	Advanced for further consideration
Option 3 - Realigned SPUI	Eliminated - higher costs; increased traffic performance was not warranted
US-6 / Spanish Fork Interchange (Exit 257 & 258)	
Option 1 - Diamond w/ SB Loop	Eliminated - safety concerns associated with slow-speed loop ramps
Option 2 - Diamond w/ 2 SB Loops	Eliminated - safety concerns associated with slow-speed loop ramps
Option 3 - Diamond w/ SB Flyover	Advanced for further consideration
New Spanish Fork / Springville Interchange (Exit 259)	
Option 1 - Diamond	Eliminated - improvements are proposed to adjacent interchanges. Did not meet FHWA warrants
Option 2 - SPUI	Eliminated - improvements are proposed to adjacent interchanges. Did not meet FHWA warrants
South Springville Interchange (Exit 260)	
Option 1 - Diamond	Currently under development as a separate project
Option 2 - SPUI	
North Springville Interchange (Exit 261)	
Option 1 - Existing Diamond w/ modifications	Advanced for further consideration
Provo University Avenue Interchange (Exit 263)	
Option 1 - Existing w/ connection to Airport	Currently being studied as a part of the Provo East-West Connector Study
Option 2 - No Build	Advanced for further consideration
New Provo 920 South Interchange (Exit 264)	
Option 1 - SPUI	Eliminated. Not compatible with City's Long Range Transportation Master Plan; substantial impacts to homes; disrupts local traffic patterns
Option 2 - Tight Diamond	Eliminated. Not compatible with City's Long Range Transportation Master Plan; substantial impacts to homes and disrupts local traffic patterns
Provo Center Street Interchange (Exit 265)	
Option 1 - SPUI	Advanced for further consideration
Option 2 - SPUI w/ Flyover	Eliminated - higher costs and impacts. SPUI functions with an acceptable LOS without the flyover
Option 3 - Tight Diamond w/ Flyover	Eliminated - higher costs and impacts
New Provo 820 North Interchange (Exit 266)	
Option 1 - Diamond	Eliminated as a standalone interchange; not compatible with the City's Long Range Transportation Master Plan; NB On-Ramp does not meet AASHTO standards for maximum vertical grade over railroad
Option 2 - SPUI	Eliminated as a standalone interchange; not compatible with the City's Long Range Transportation Master Plan; NB On-Ramp does not meet AASHTO standards for maximum vertical grade over railroad
Option 3 - Realigned Diamond	Eliminated as a standalone interchange - not compatible with the City's Long Range Transportation Master Plan.
New Orem 2000 South Interchange (Exit 268)	
Option 1 - Realigned Diamond	Eliminated. Not compatible with City's Long Range Transportation Master Plan; substantial impacts to homes and disrupts local traffic patterns
Option 2 - Realigned SPUI	Eliminated. Not compatible with City's Long Range Transportation Master Plan; substantial impacts to homes and disrupts local traffic patterns
Option 3 - SPUI	Eliminated. Not compatible with City's Long Range Transportation Master Plan; substantial impacts to homes and disrupts local traffic patterns
University Pkwy Interchange (Exit 269)	
Option 1 - SPUI	Eliminated as a standalone option. Does not adequately address traffic congestion.
Option 2 - SPUI w/ flyover	Advanced for further consideration in Provo and Orem Options B & D
800 South Interchange (Exit 270)	
Option 1 - Modified Diamond w/ Flyover to UVSC	Eliminated - does not meet driver expectancy, higher costs and does not conform with UVSC's master plan
Option 2 - Diamond	Eliminated - does not meet UDOT standards for spacing between an interchange and adjacent intersection
Option 3 - Diamond Option A	Eliminated - does not conform to UVSC's master plan
Option 4 - Diamond Option B	Eliminated - does not conform to UVSC's master plan
Option 5 - Diamond Option C	Eliminated - does not conform to UVSC's master plan, substantial impacts to homes and disrupts local traffic patterns
Option 6 - Split Diamond w/ U-Turn Option D	Eliminated - does not meet driver expectancy, higher costs and does not conform with UVSC's master plan
Option 7 - Diamond Option E	Eliminated - does not conform to UVSC's master plan
Option 8 - Diamond Option F	Advanced for further consideration in Provo and Orem Options A & C

Table B-1: Summary and Status of Interchange Configurations Evaluated

Interchange Location and Option	Status and Reason for Elimination
Orem Center Street Interchange (Exit 271)	
Option 1 - SPUI	Advanced for further consideration
Option 2 - Diamond w/ Roundabouts	Eliminated - does not meet driver expectancy
Option 3 - SPUI w/ Roundabout @ 1200 W	Eliminated - does not meet driver expectancy
Orem 800 North Interchange (Exit 272)	
Option 1 - Diamond	Eliminated - does not perform as well as the SPUI
Option 2 - SPUI	Advanced for further consideration
Orem 1600 North Interchange (Exit 273)	
Option 1 - Diamond	Advanced for further consideration
Option 2 - Realigned SPUI	Eliminated - substantial impacts
Option 3 - Split Diamond	Eliminated - safety concerns with at-grade railroad crossing conflict with ramps
Pleasant Grove Interchange (Exit 275)	
Option 1 - Diamond	Advanced for further consideration
Option 2 - SPUI	Eliminated because existing interchange performs with an acceptable LOS
American Fork 500 East Interchange (Exit 276)	
Option 1 - Diamond	Advanced for further consideration
Option 2 - Realigned SPUI	Eliminated - higher costs and impacts
American Fork Main St Interchange (Exit 278)	
Option 1 - Diamond	Advanced for further consideration
Option 2 - Realigned Diamond	Eliminated - does not perform as well as the SPUI
Option 3 - Realigned SPUI	Advanced for further consideration
Option 4 - Trumpet	Eliminated - does not perform as well as the SPUI
Option 5 - Realigned Trumpet	Eliminated - does not perform as well as the SPUI
Lehi Main Street Interchange (Exit 279)	
Option 1 - SPUI	Advanced for further consideration
Option 2 - Split Diamond (Partial Option 1)	Eliminated - traffic results did not warrant increased impacts, increased costs and disruptions to local traffic patterns
Option 3 - Split Diamond (Partial Option 2)	Eliminated - traffic results did not warrant increased impacts, increased costs and disruptions to local traffic patterns
Option 4 - Split Diamond (Full)	Eliminated - traffic results did not warrant increased impacts, increased costs and disruptions to local traffic patterns
New Lehi 400 West Interchange (Exit 281)	
Option 1 - Realigned Diamond	Eliminated - improvements are proposed at adjacent interchanges and therefore does not meet FHWA warrants, safety concerns with at-grade railroad crossing, does not meet AASHTO standards for railroad crossings, substantial impacts and disruptions to local traffic patterns
Option 2 - Realigned SPUI	Eliminated - improvements are proposed at adjacent interchanges and therefore does not meet FHWA warrants, safety concerns with at-grade railroad crossing, does not meet AASHTO standards for railroad crossings, substantial impacts and disruptions to local traffic patterns
Option 3 - Couplet	Eliminated - improvements are proposed to adjacent interchanges and therefore does not meet FHWA warrants, does not meet driver expectancy, substantial impacts and disruptions to local traffic patterns
Option 4 - Tight Diamond	Eliminated - improvements are proposed at adjacent interchanges and therefore does not meet FHWA warrants, safety concerns with at-grade railroad crossing, does not meet AASHTO standards for railroad crossings, substantial impacts and disruptions to local traffic patterns
Lehi 1200 West Interchange (Exit 282)	
Option 1 - SPUI	Advanced for further consideration
Alpine Interchange (Exit 284)	
Option 1 - Diamond	Eliminated - does not adequately address traffic congestion
Option 2 - SPUI	Advanced for further consideration
Option 3 - SPUI w/ flyover	Eliminated - higher costs
North Lehi Interchange (Exit 285)	
Option 1 - Diamond	Eliminated - does not perform as well as the SPUI and was similar in costs and impacts
Option 2 - SPUI	Advanced for further consideration
Bluffdale Interchange (Exit 288)	
Option 1 - Diamond w/ Flyover	Eliminated. Proposed Mountain View Corridor EIS to address proposed future alignment changes to 14600 South
Option 2 - SPUI w/ Flyover	Eliminated. Proposed Mountain View Corridor EIS to address proposed future alignment changes to 14600 South
Option 3 - Diamond	Eliminated - does not perform as well as the SPUI and was similar in costs and impacts
Option 4 - SPUI	Advanced for further consideration

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Exit 248 – South Payson
(Payson 800 South)

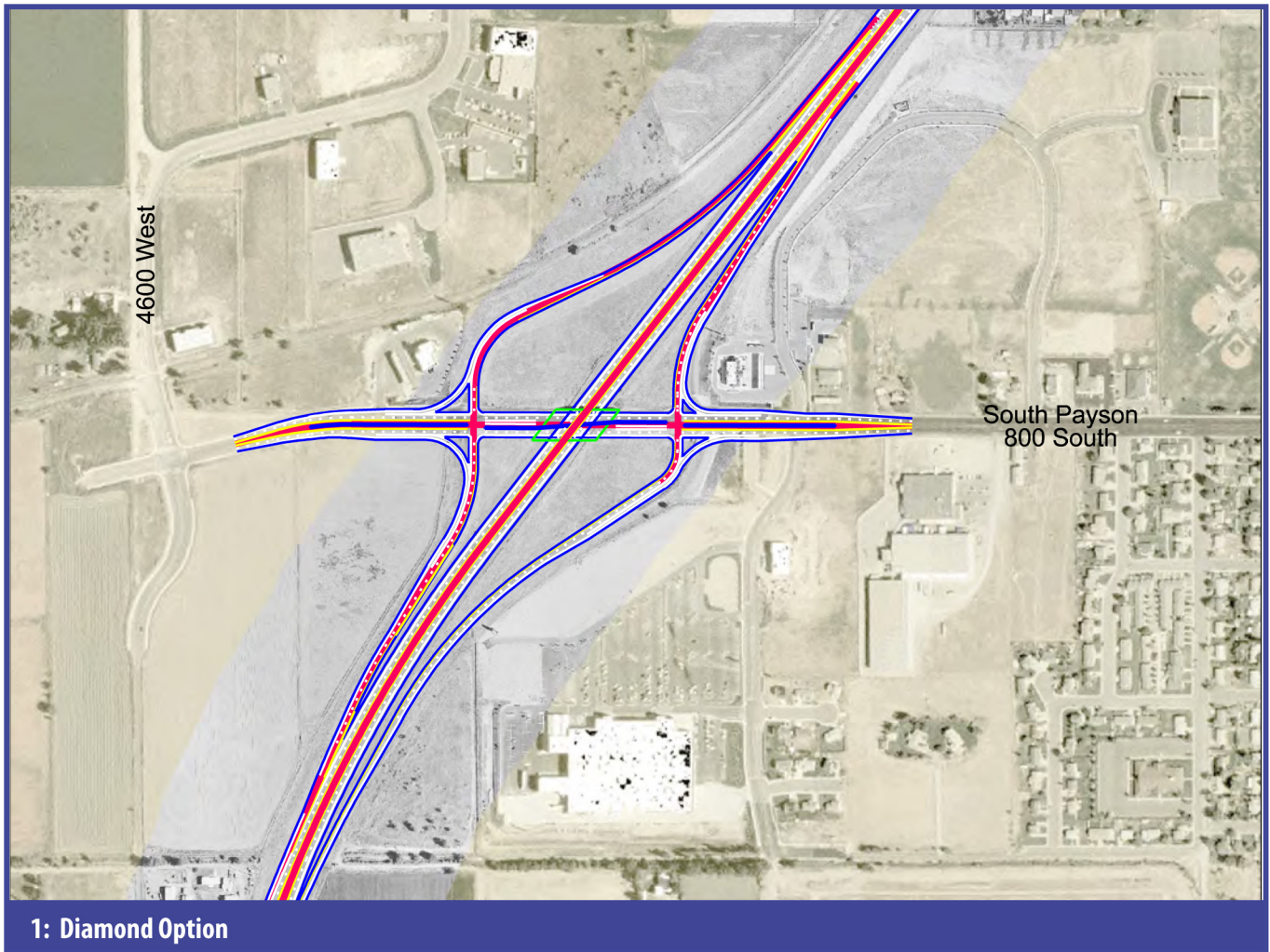


Figure B-1
South Payson Advanced Interchange Option



Exit 250 – North Payson
(Payson Main Street)

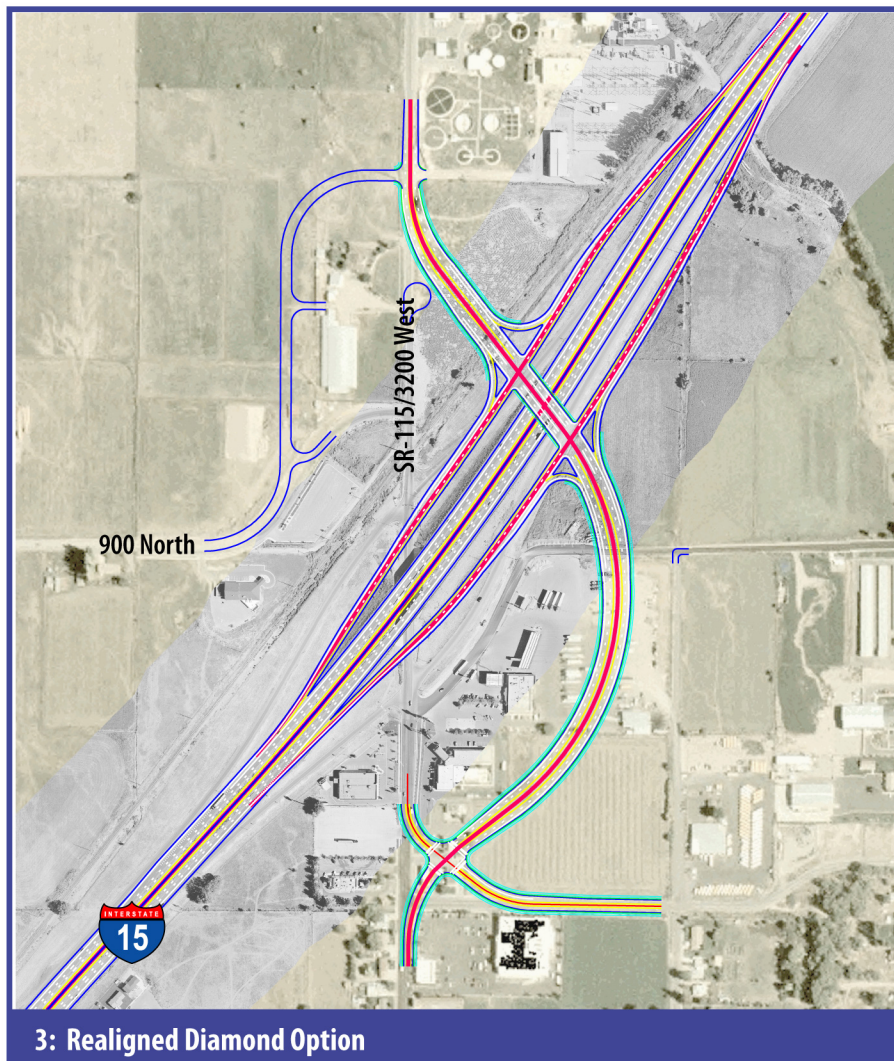


Figure B-2
North Payson Advanced Interchange Option



Exit 253 – SR-164
Benjamin



Figure B-3
Benjamin Advanced Interchange Option



Exit 257-258 - Spanish Fork Main Street, US-6

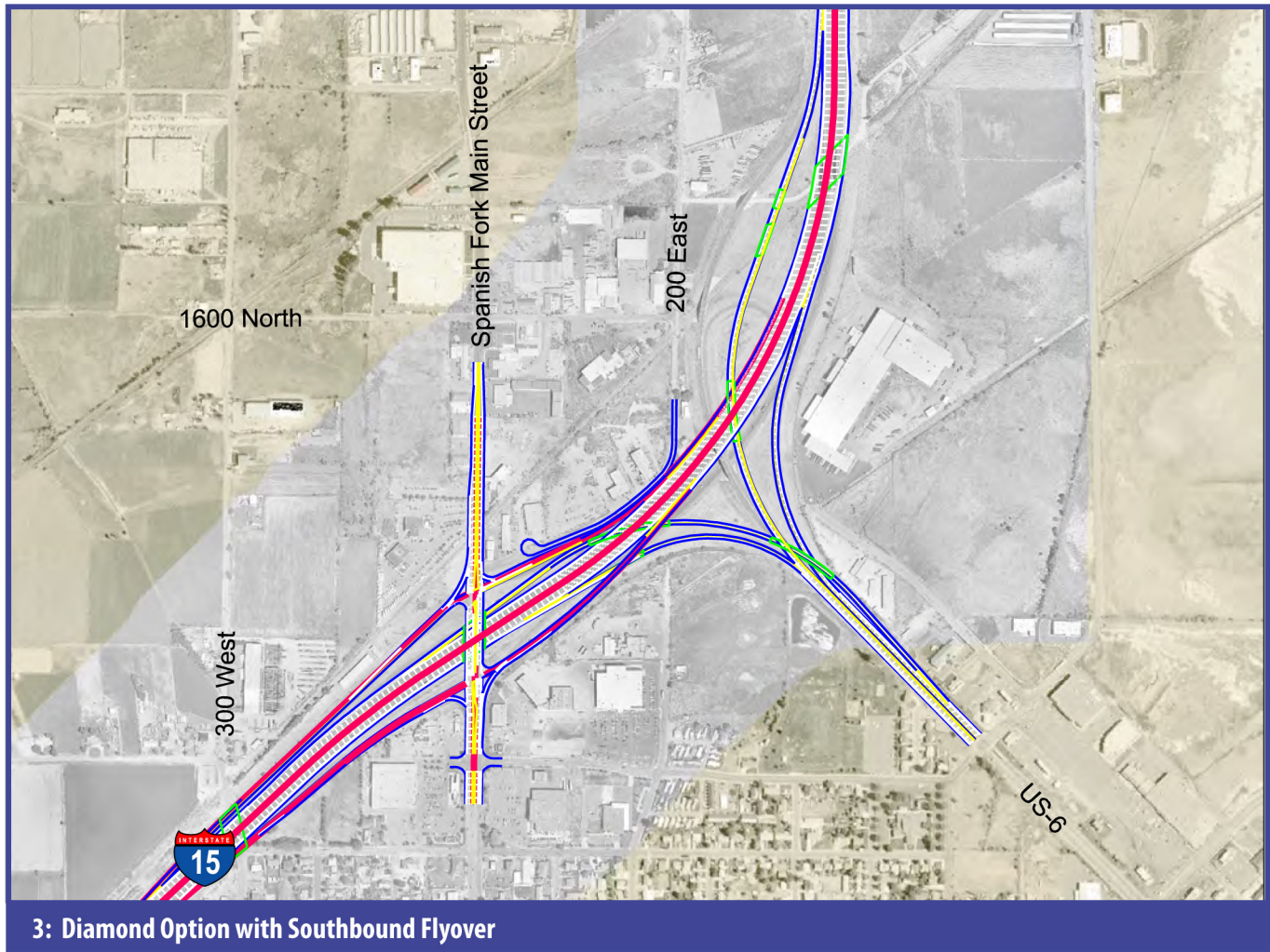


Figure B-4
Spanish Fork Main Street Advanced Interchange Option



Exit 261 - North Springville

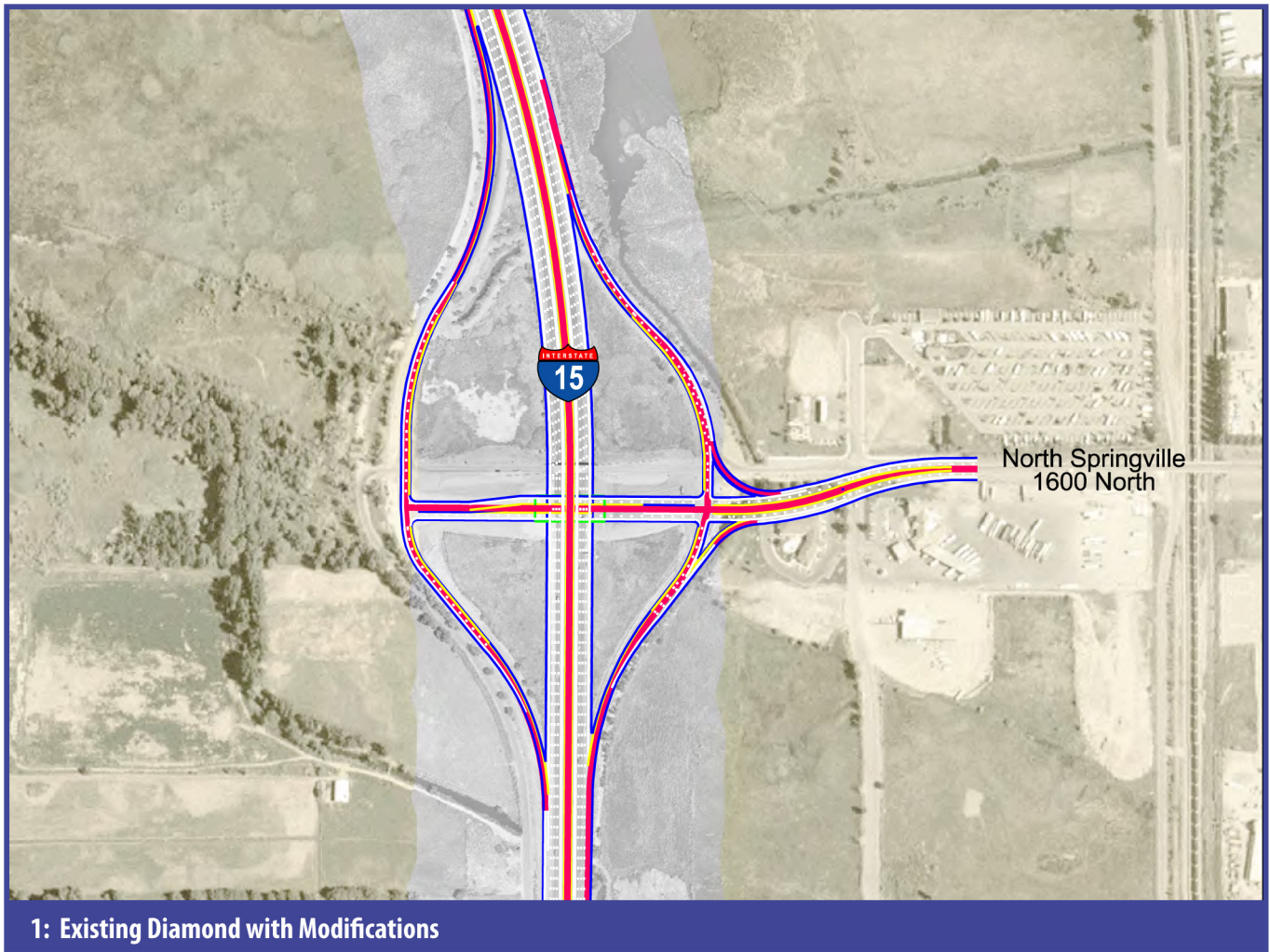
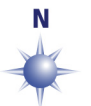


Figure B-5
North Springville Advanced Interchange Option



Exit 263 - Provo University Avenue

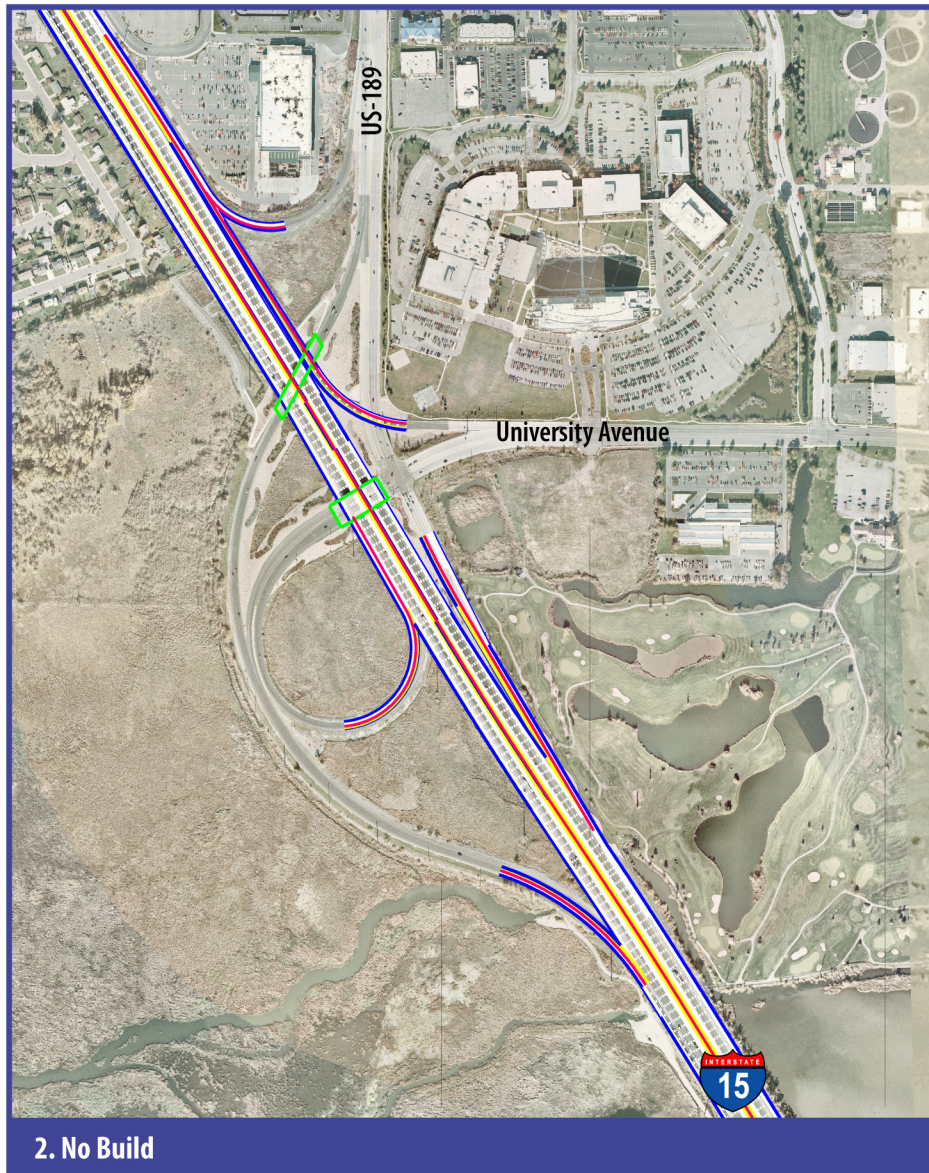


Figure B-5.1
Provo University Avenue Advanced Interchange Option



Exit 265 - Provo Center Street

---Options C and D---



Figure B-6
Provo Center Street ---Options C and D--- Advanced Interchange Option

N



Exit 265 - Provo Center Street

---Diamond --- Options A and B---



Figure B-7.1
Provo Center Street ---Diamond --- Options A and B--- Advanced Interchange Option



Exit 265 - Provo Center Street

---SPUI --- Options A and B---



Figure B-7.2
Provo Center Street ---SPUI --- Options A and B--- Advanced Interchange Option

N



Exit 269 - University Parkway

---with 800 South and Options A and C---



Figure B-8
University Parkway ---with 800 South and Options A and C--- Advanced Interchange Option

N



Exit 269 - University Parkway

---with Options B and D---

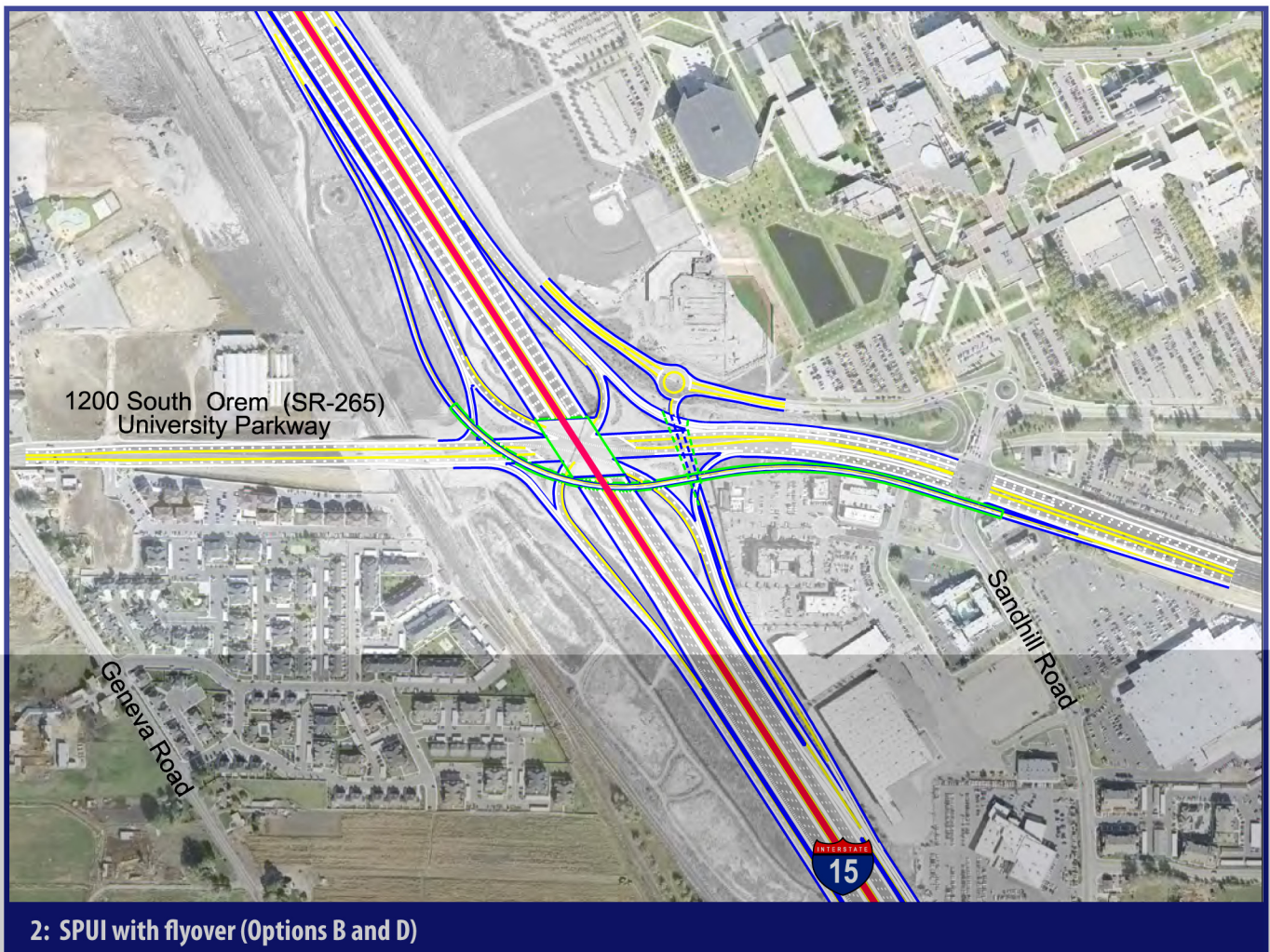


Figure B-9
University Parkway ---with Options B and D--- Advanced Interchange Option

N



Exit 271 - Orem Center Street

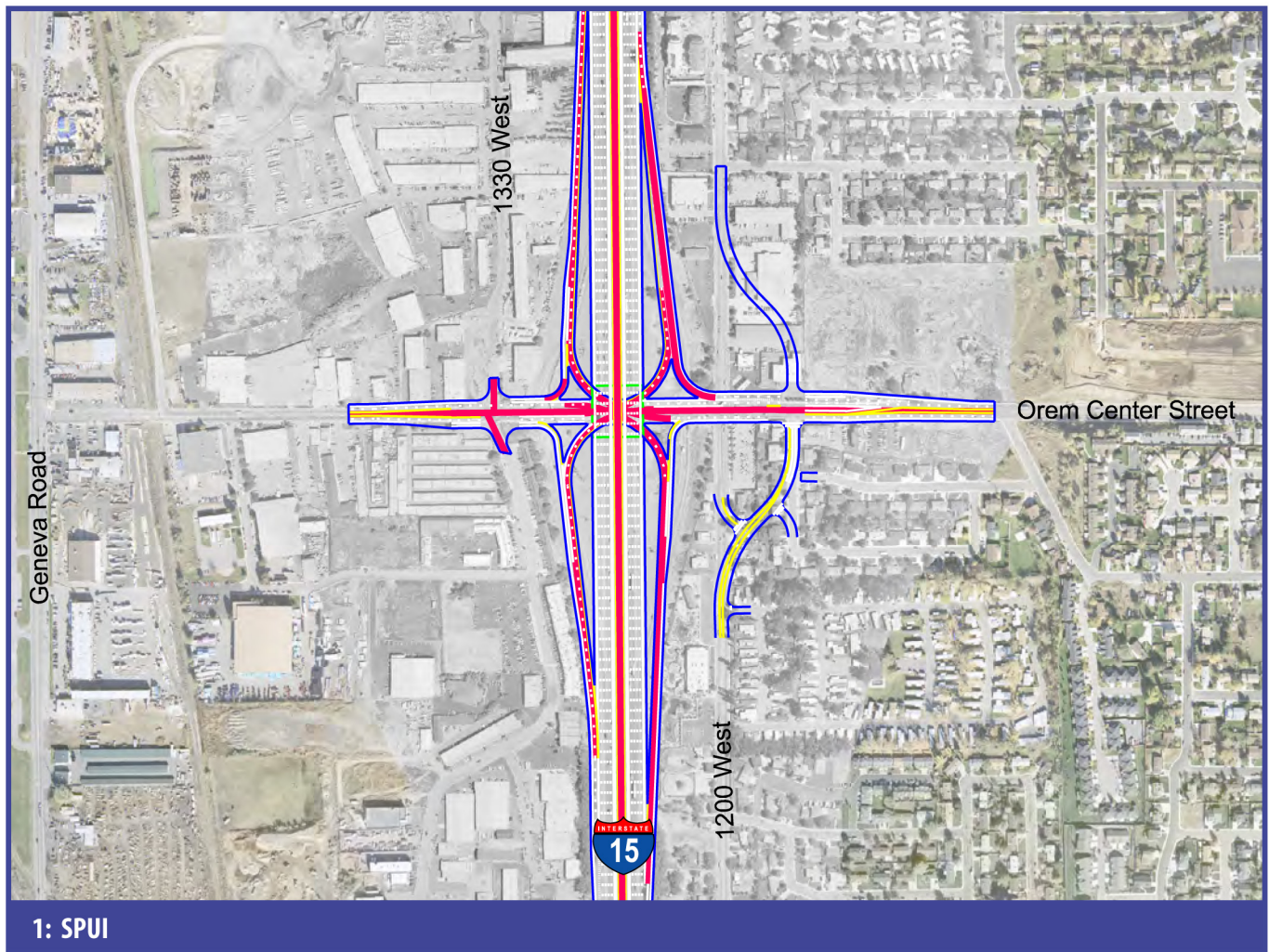


Figure B-10
Orem Center Street Advanced Interchange Option



Exit 272 - Orem 800 North

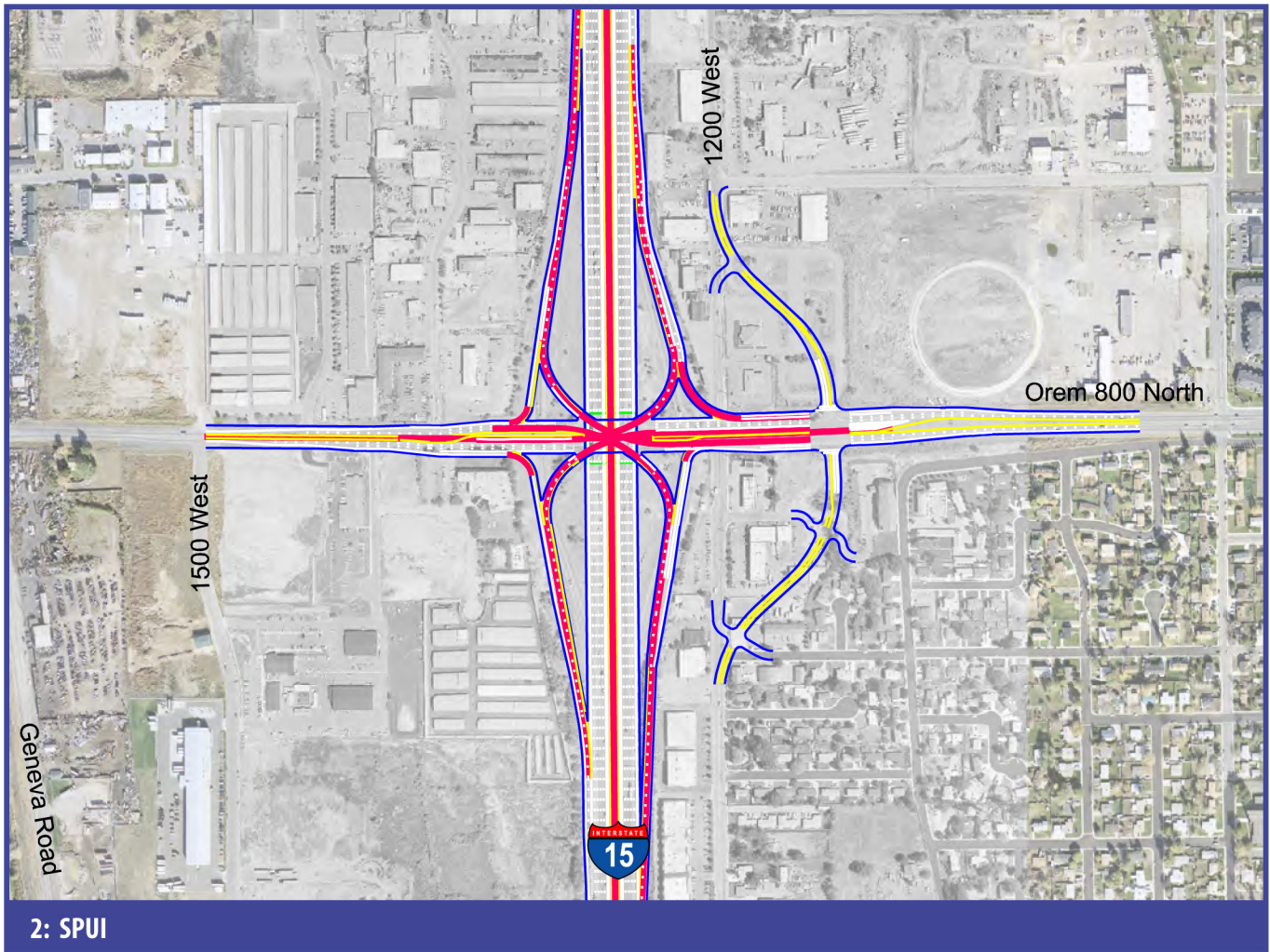


Figure B-11
Orem 800 North Advanced Interchange Option



Exit 273 - Orem 1600 North

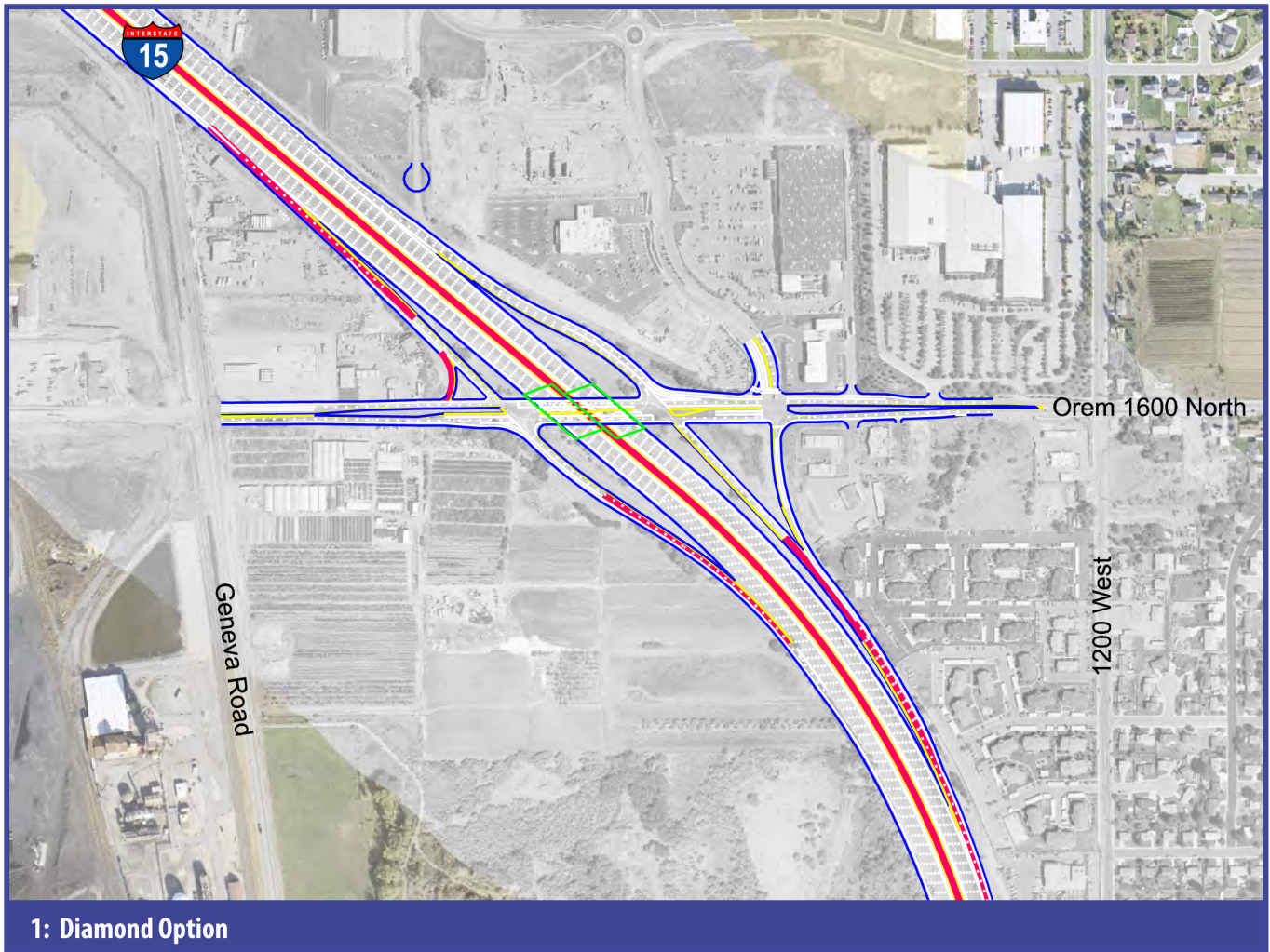


Figure B-12
Orem 1600 North Advanced Interchange Option



Exit 275 - Pleasant Grove



Figure B-13
Pleasant Grove Advanced Interchange Option



Exit 276 - American Fork 500 East

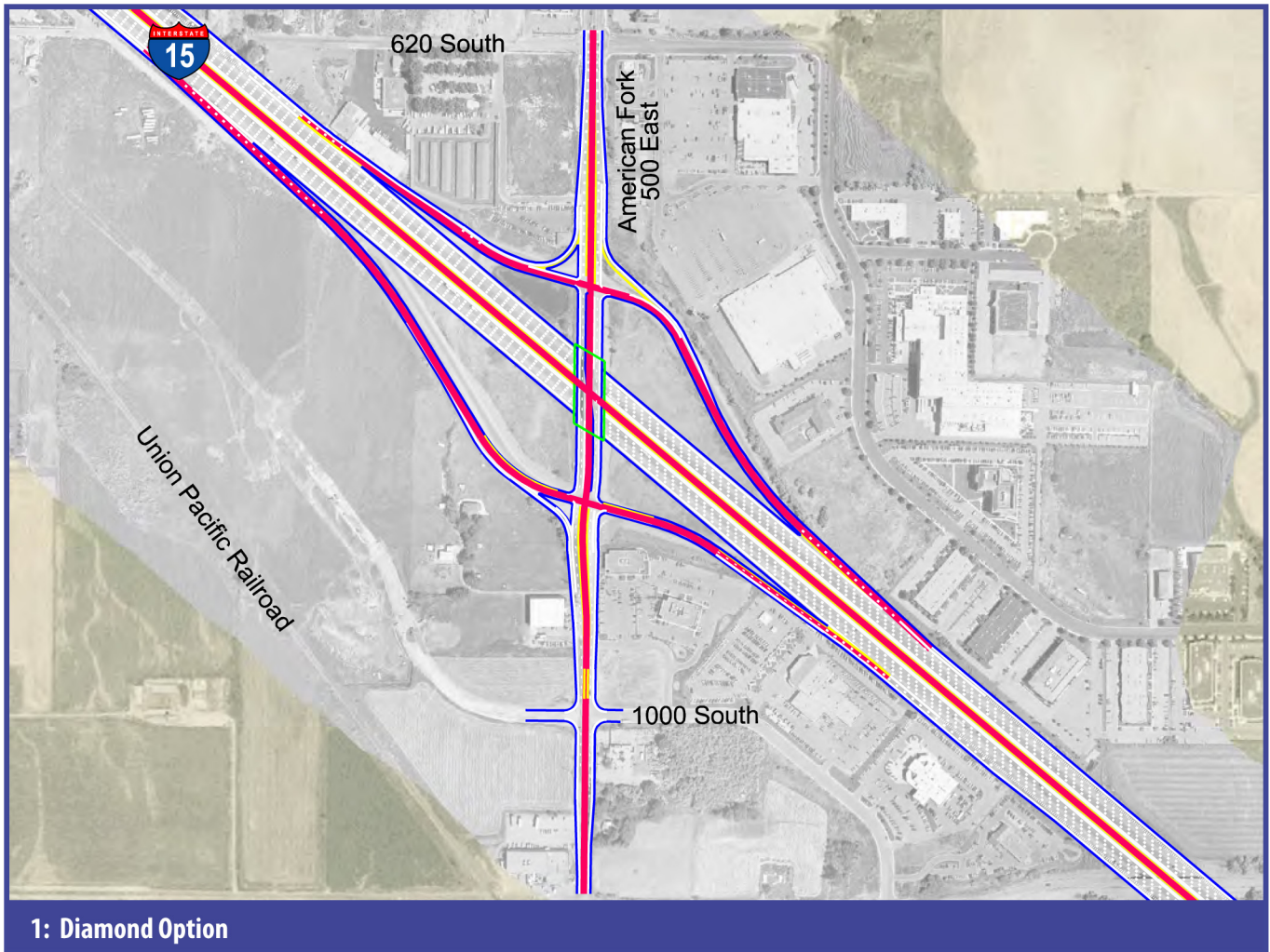
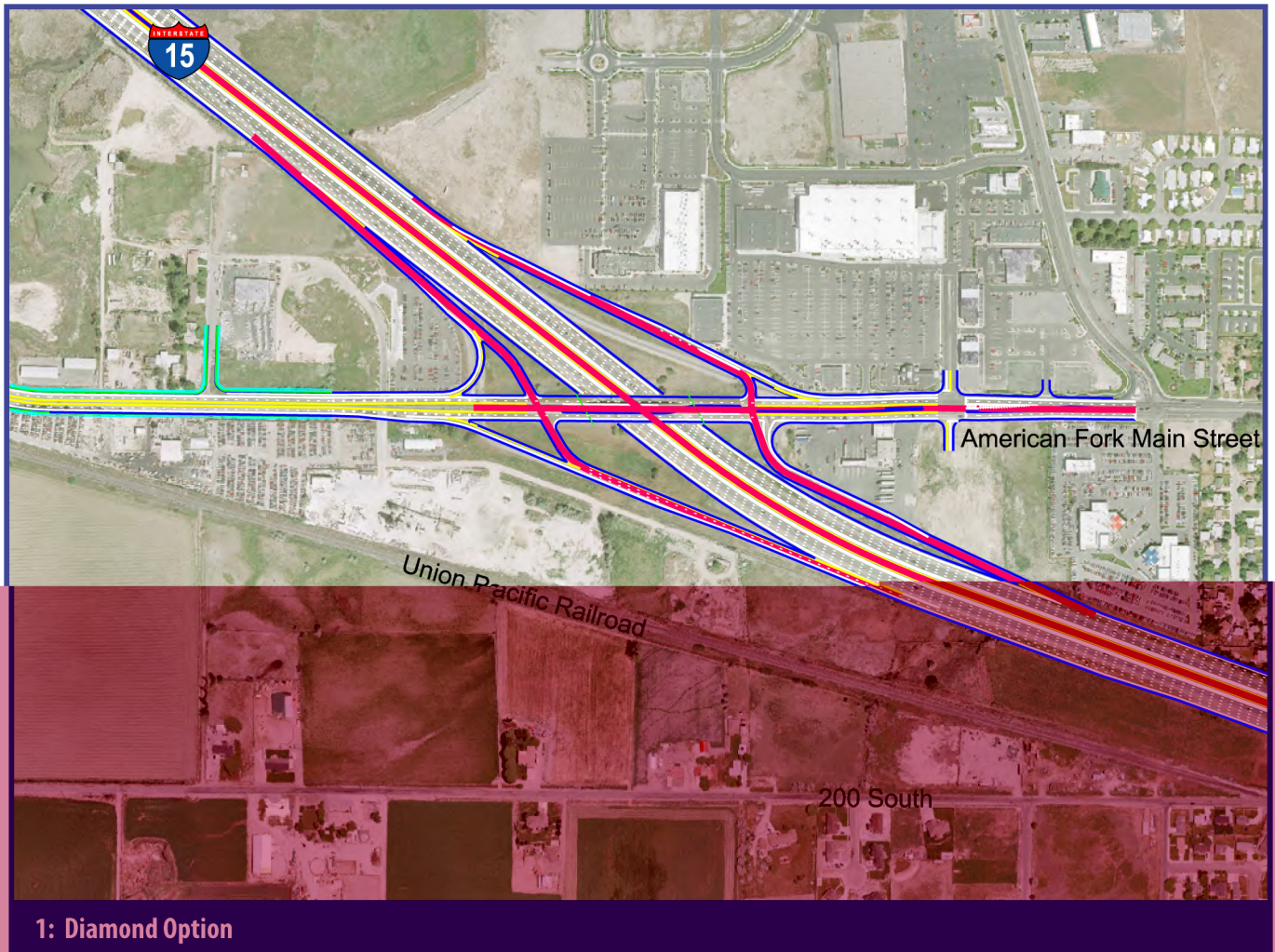


Figure B-14
American Fork 500 East Advanced Interchange Option



Exit 278 - American Fork Main Street



Exit 278 - American Fork Main Street

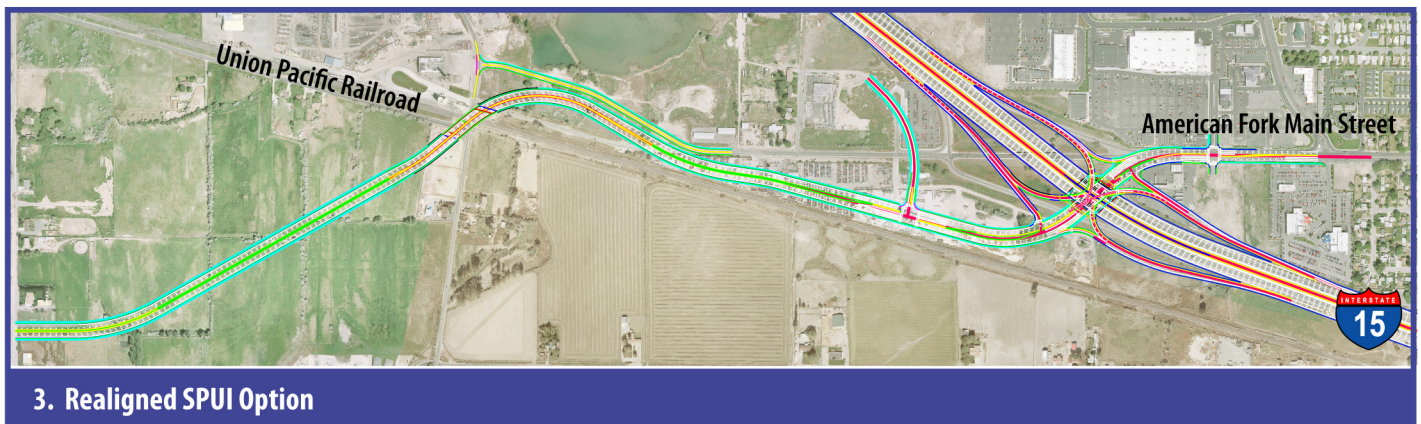


Figure B-16
American Fork Main Street Advanced Interchange Option



Exit 279 - Lehi Main Street

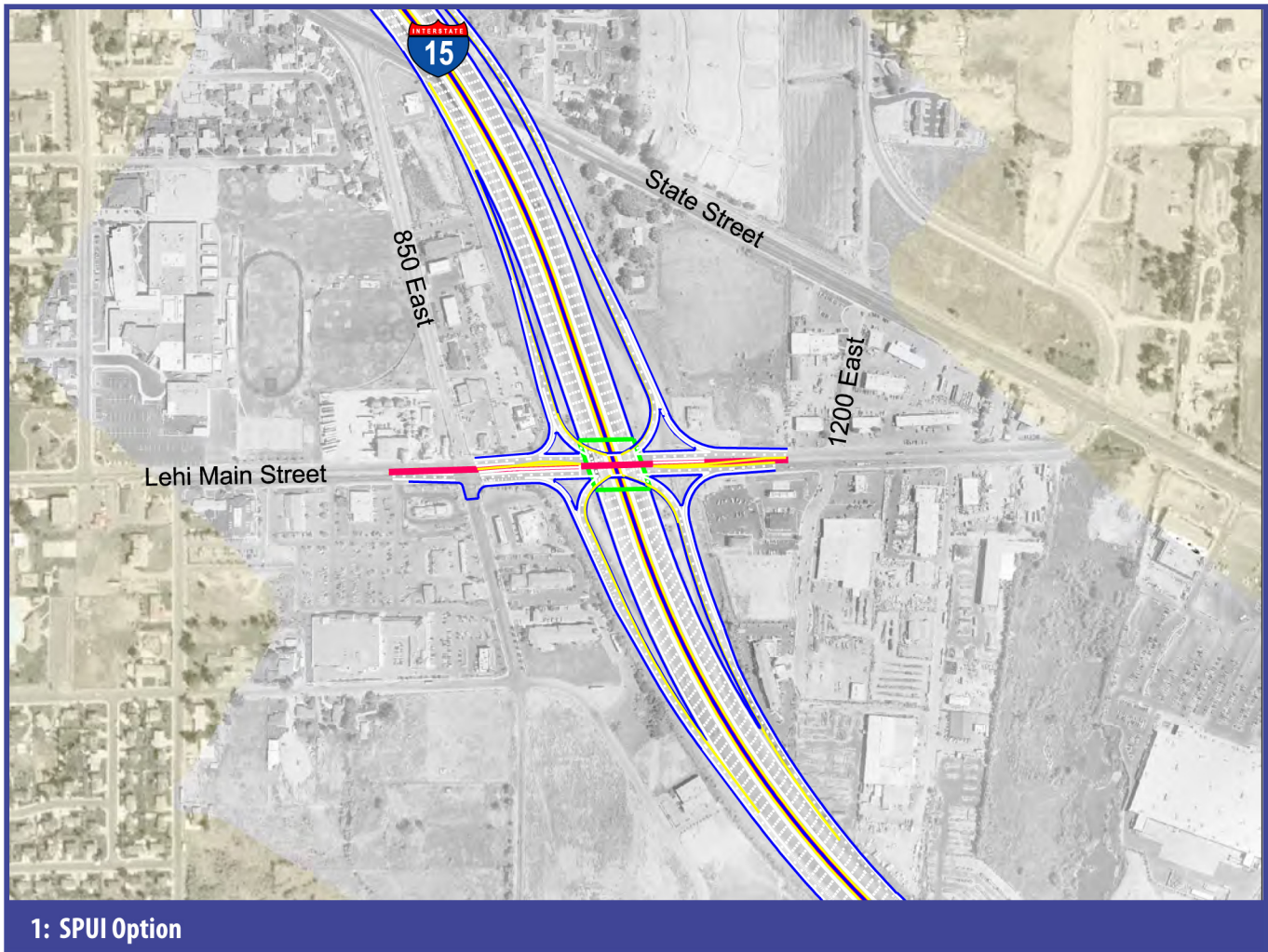


Figure B-17
Lehi Main Street Advanced Interchange Option



Exit 282 - Lehi 1200 West

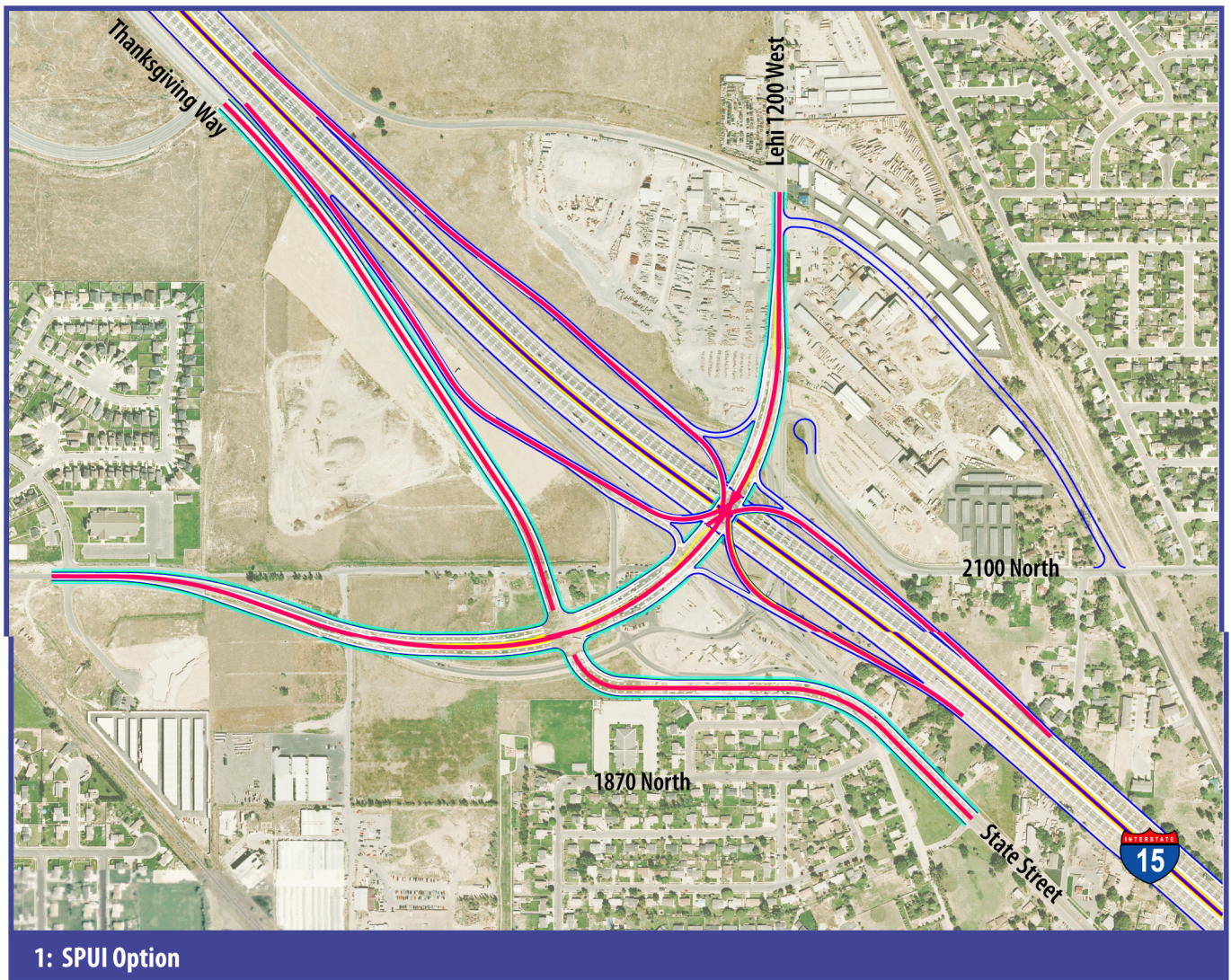
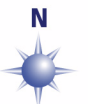


Figure B-18
Lehi 1200 West Advanced Interchange Option



Exit 284 - Alpine

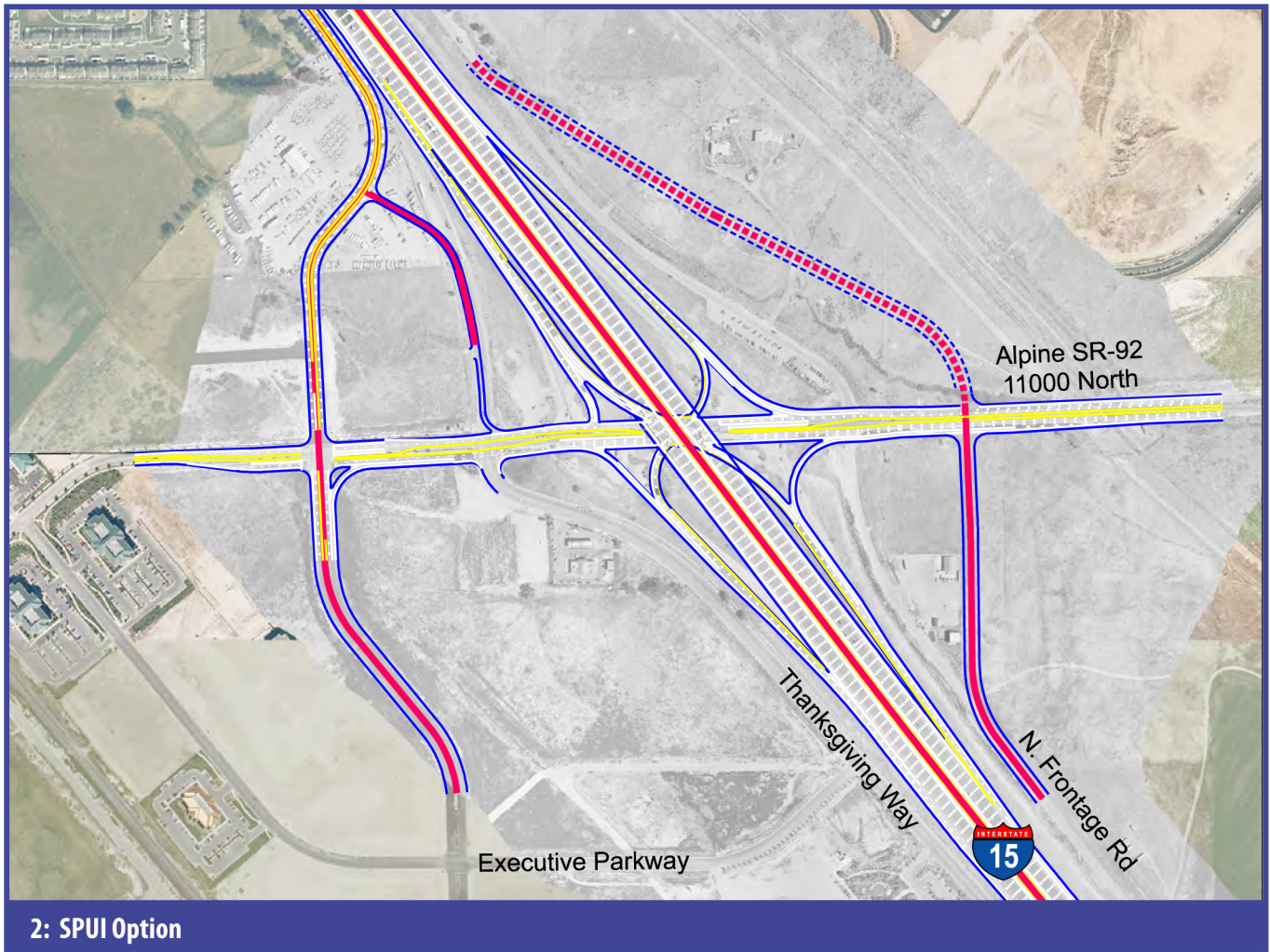


Figure B-19
Alpine Advanced Interchange Option



Exit 285 - New North Lehi Interchange

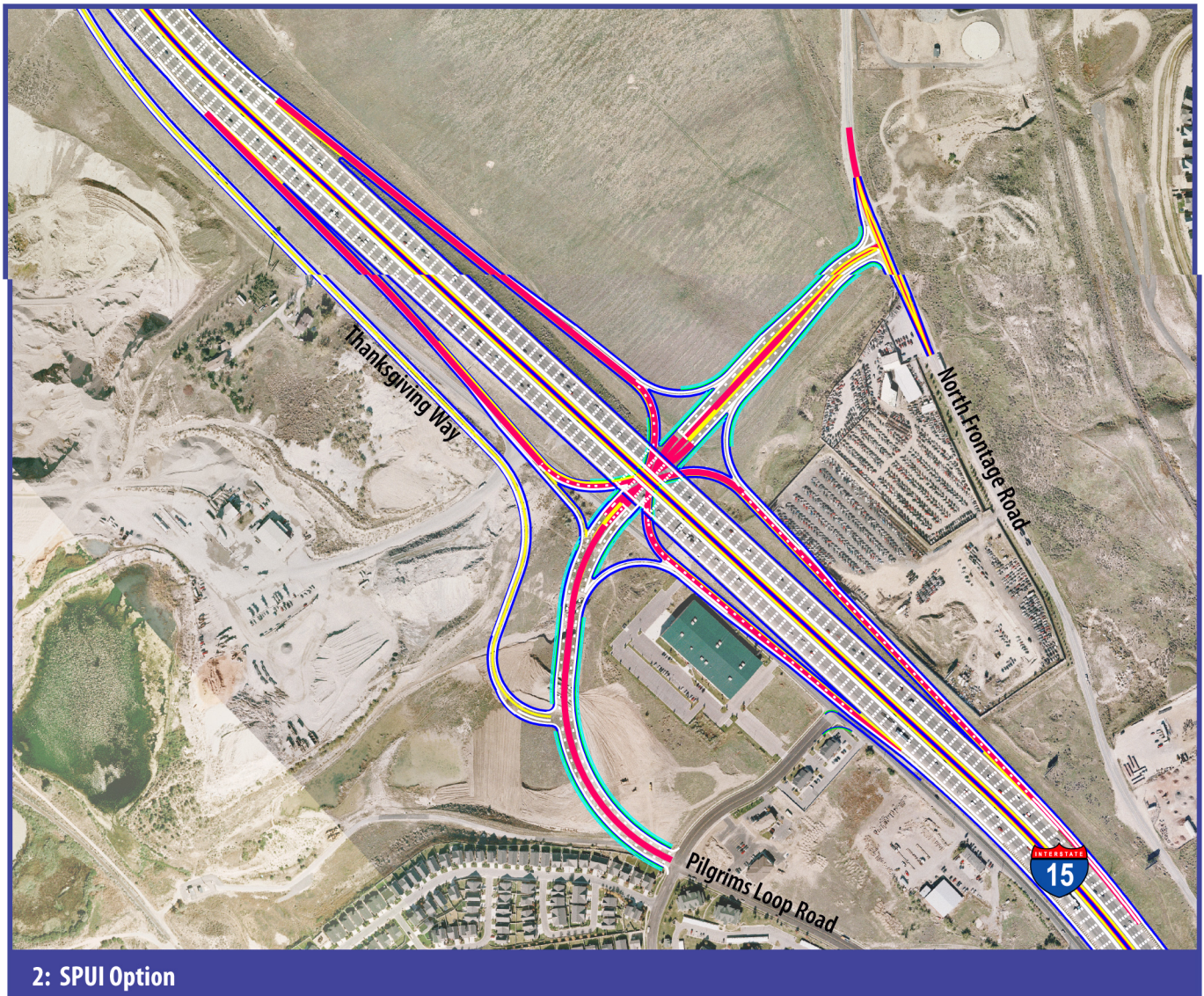


Figure B-20
New North Lehi Advanced Interchange Option



Exit 288 - Bluffdale 14600 South

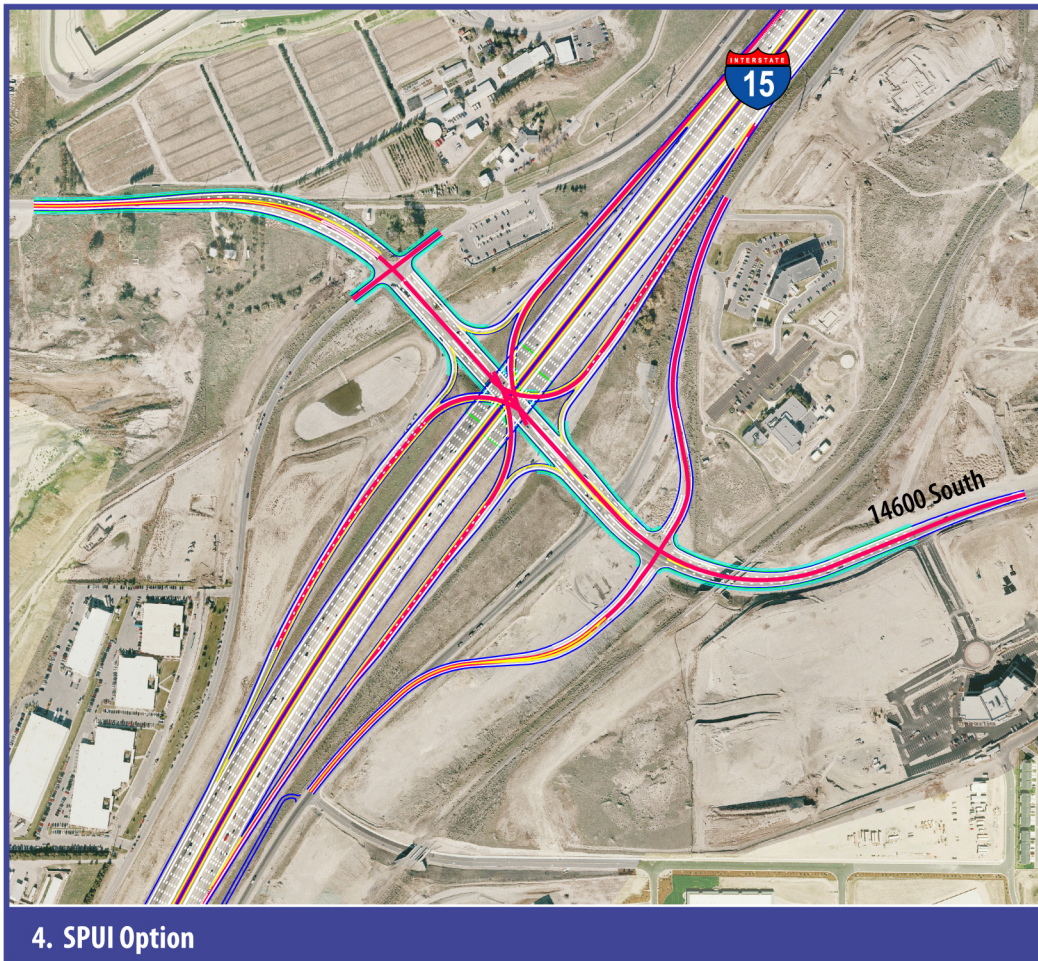


Figure B-20.1
Bluffdale Interchange Advanced Option

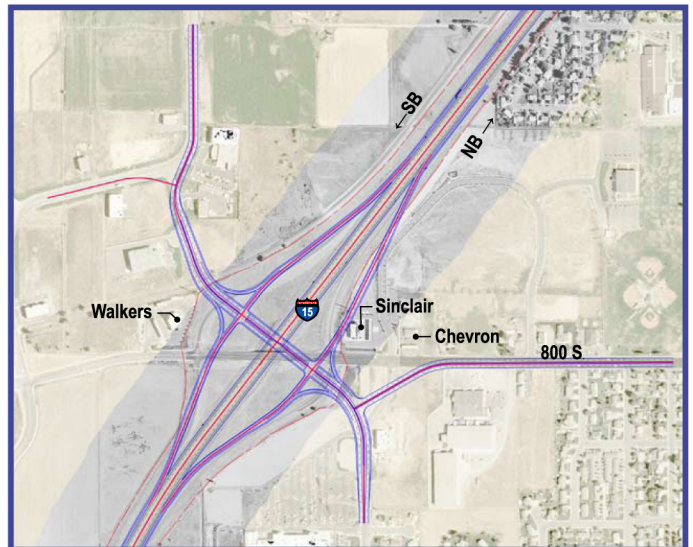


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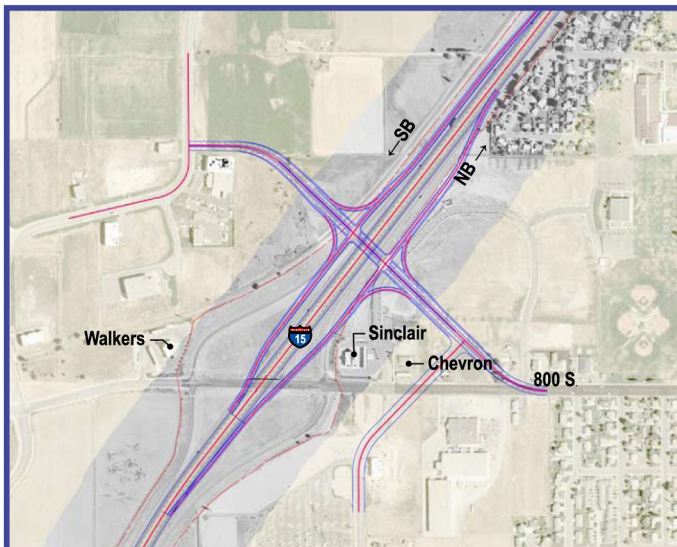
Exit 248 – South Payson
(Payson 800 South)



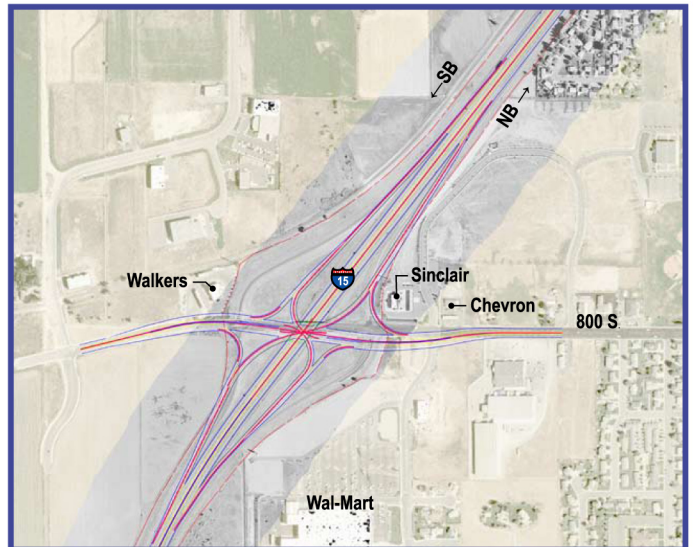
2: Realigned Diamond Option



4: Realigned Diamond Option



3: Realigned Diamond Option

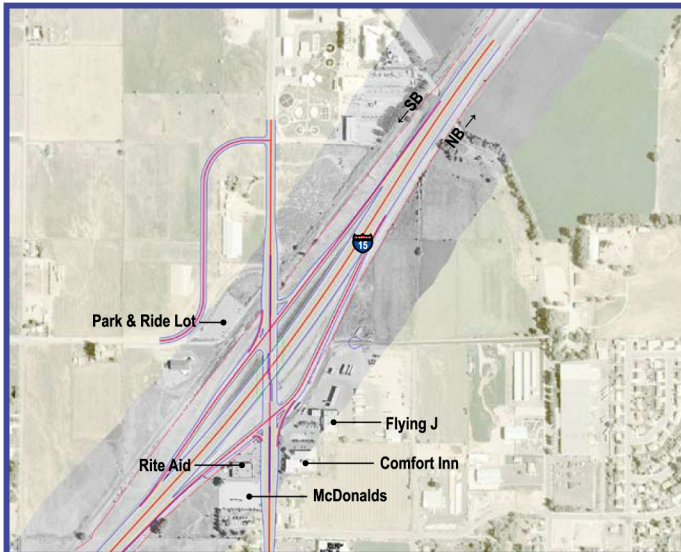


5: SPUI Option

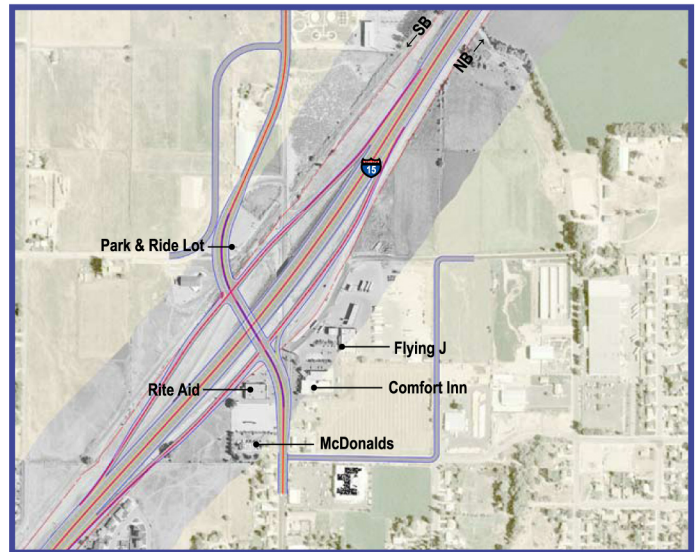
Figure B-21
South Payson Eliminated Interchange Options



Exit 250 – North Payson
(Payson Main Street)



1: Diamond Option



4: Realigned Diamond Option



2: Realigned SPUI Option

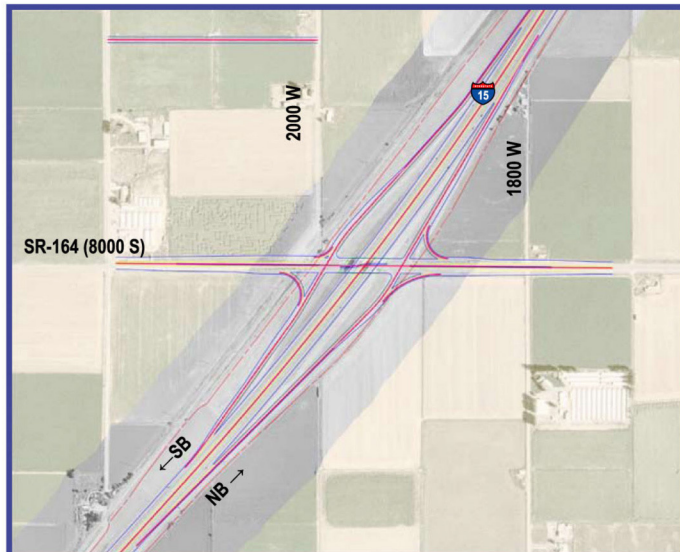


5: Realigned Diamond Option

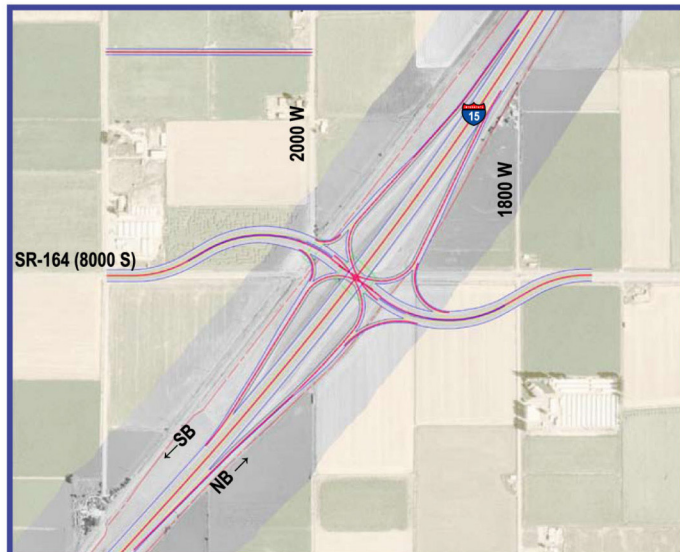
Figure B-22
North Payson Eliminated Interchange Options



**Exit 253 - SR-164
Benjamin**

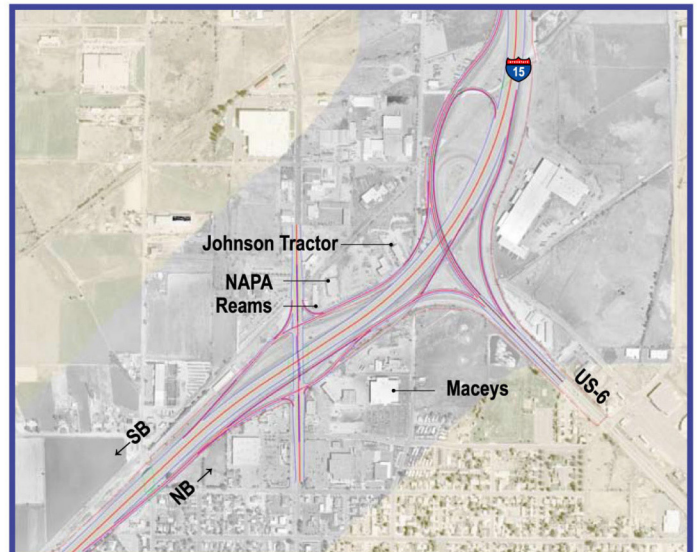


1: Diamond Option

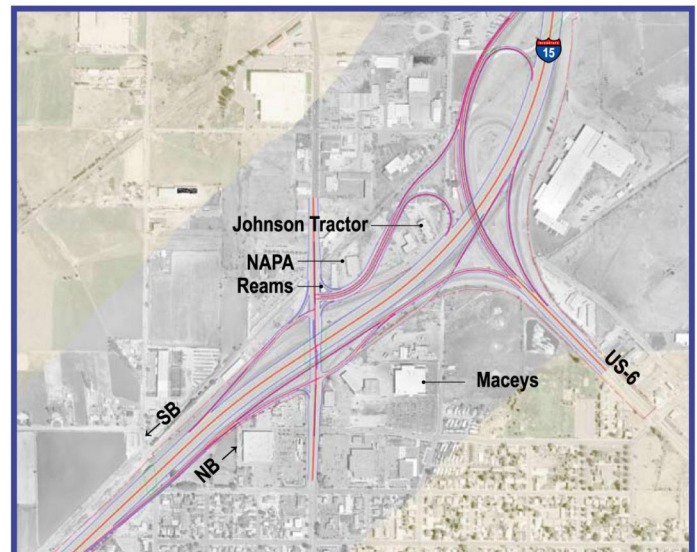


3: Realigned SPUI Option

**Exit 257-258 - Spanish
Fork Main Street, US-6**



1: Diamond with SB Loop Option

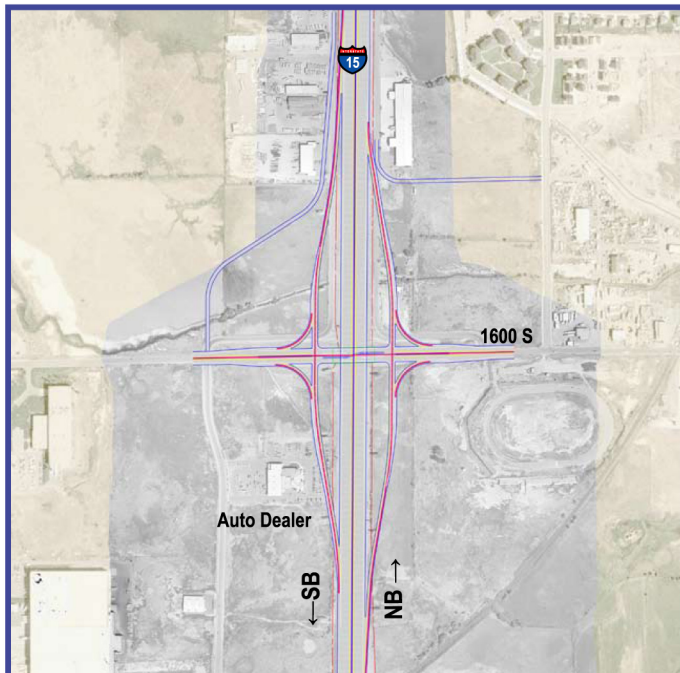


2: Diamond with 2 SB Loops Option

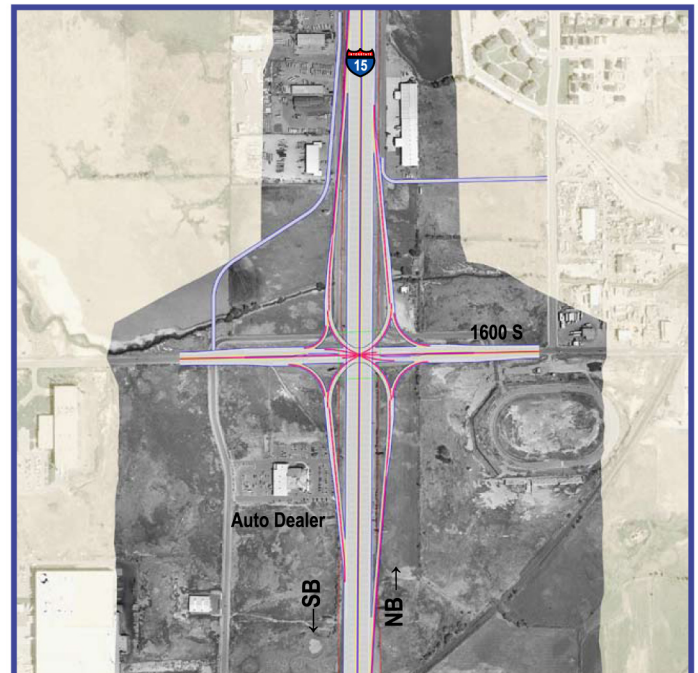
Figure B-23
Benjamin and Spanish Fork Main Street Eliminated Interchange Options



Exit 259 - Spanish Fork (Springville)



1: Diamond Option



2: SPUI Option

Figure B-24
Spanish Fork (Springville) Eliminated Interchange Options



Exit 264 – Provo 920 South

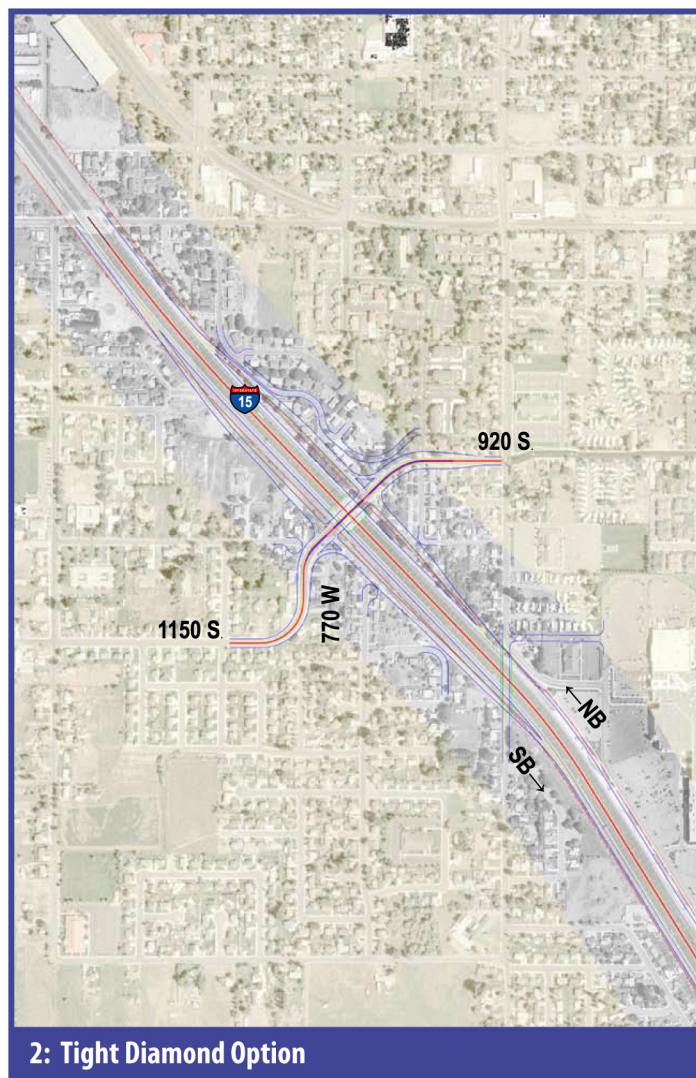
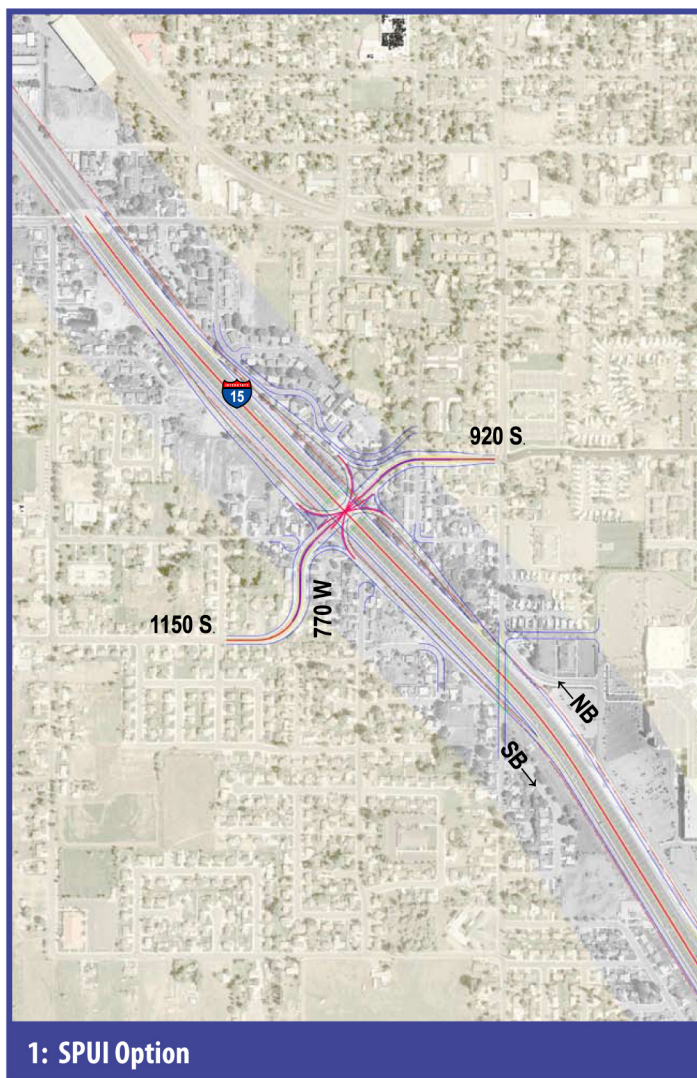
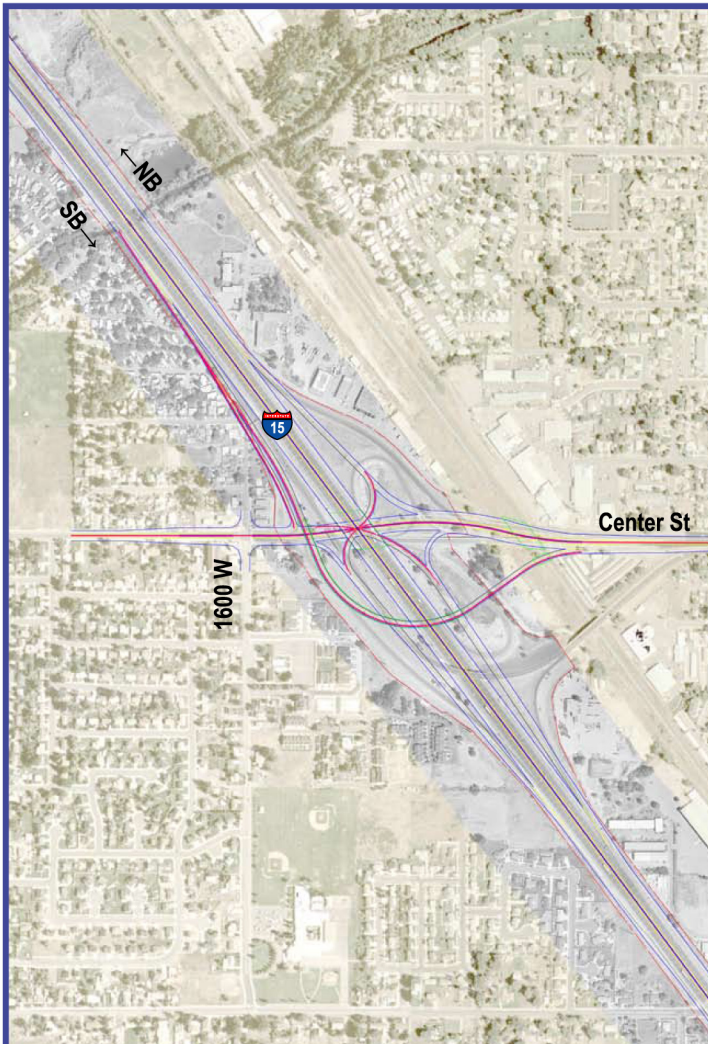


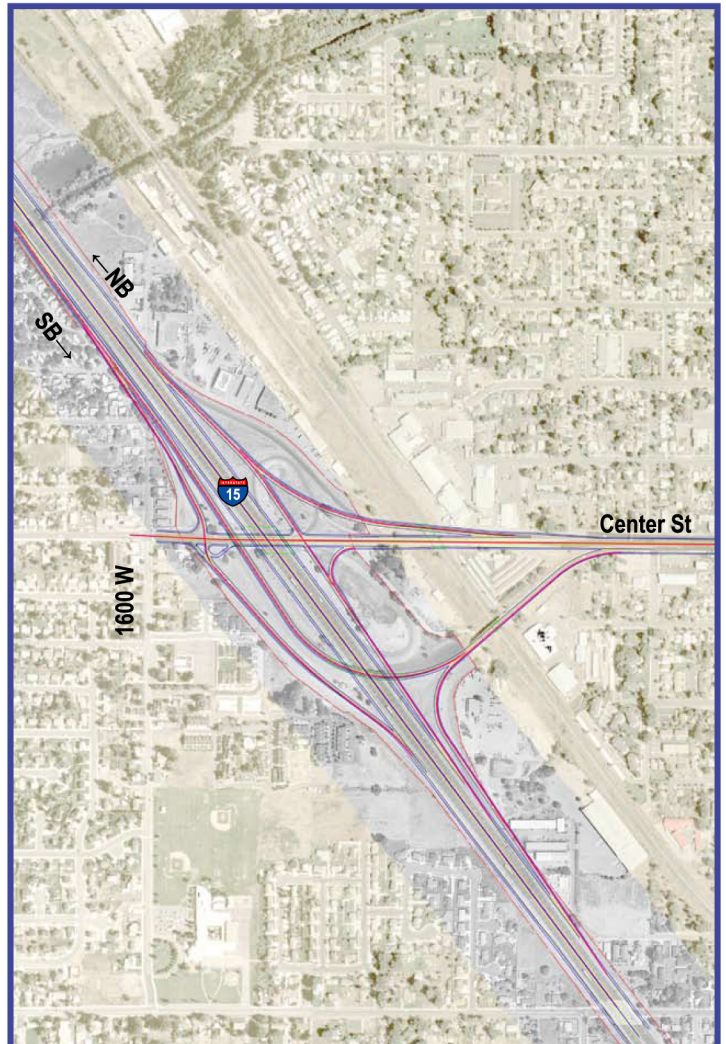
Figure B-25
Provo 920 South Eliminated Interchange Options



Exit 265 – Provo Center Street



2: SPUI with Flyover Option



3: Tight Diamond with Flyover Option

Figure B-26
Provo Center Street Eliminated Interchange Options



Exit 266 – Provo 820 North

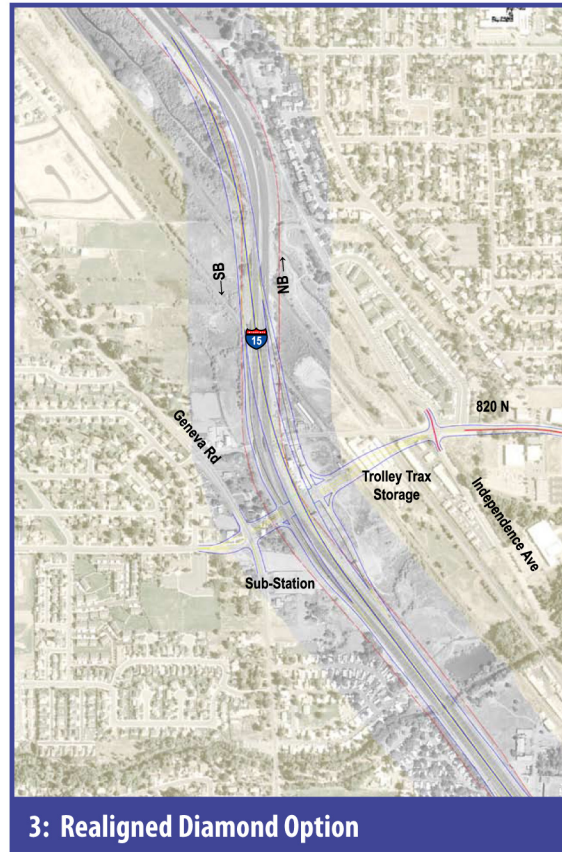
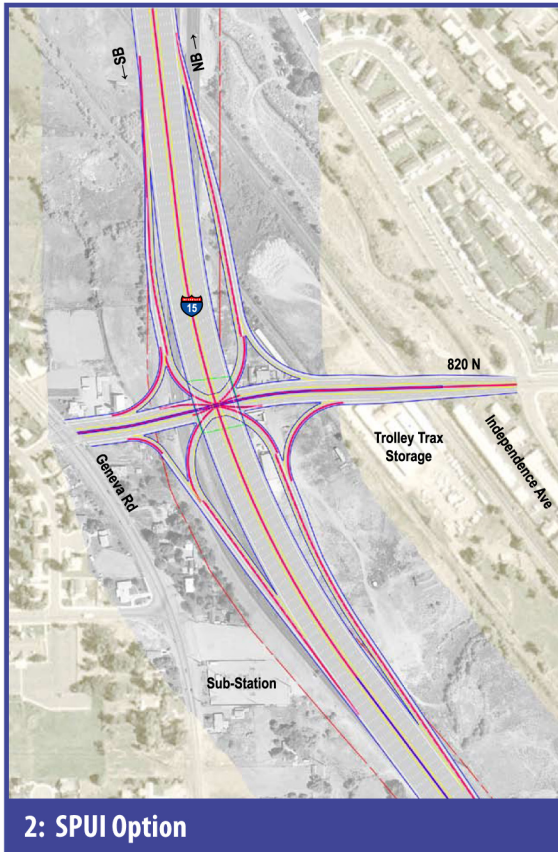
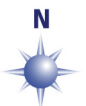


Figure B-27
Provo 820 North Eliminated Interchange Options



Exit 268 – Orem 2000 South

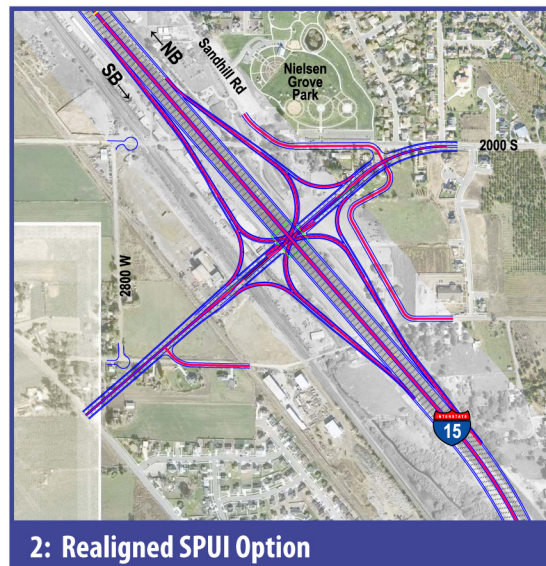


Figure B-28
Orem 2000 South Eliminated Interchange Options



Exit 269 - University Parkway

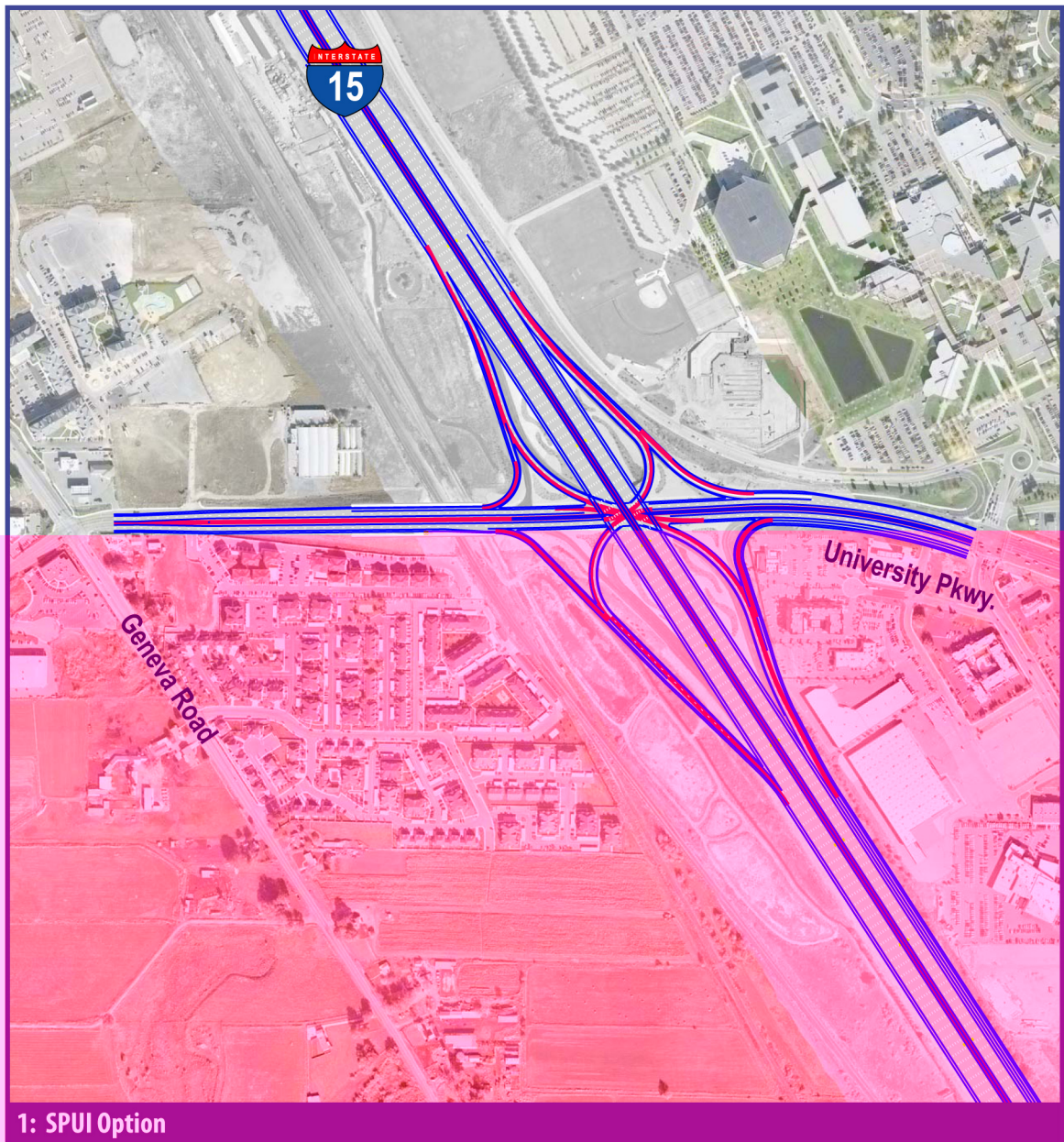


Figure B-29
University Parkway Eliminated Interchange Options

N



Exit 270 - New Orem 800 South

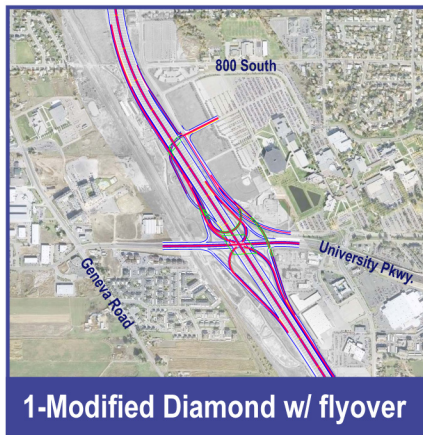
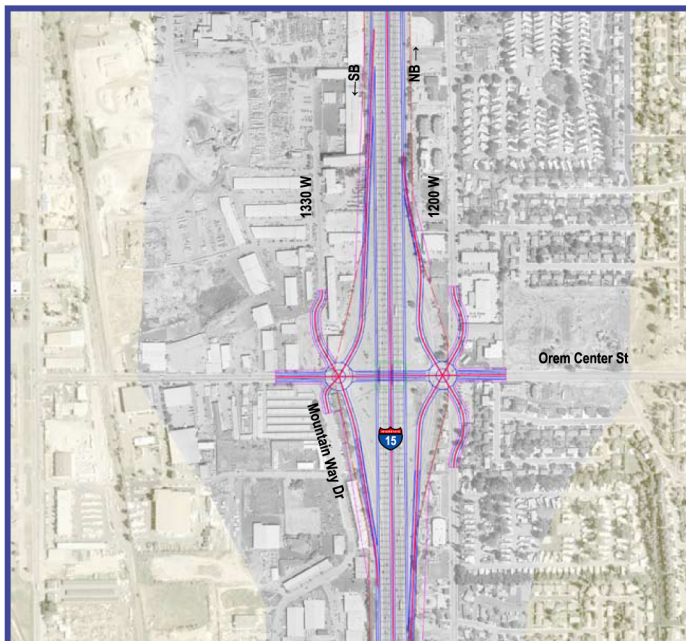


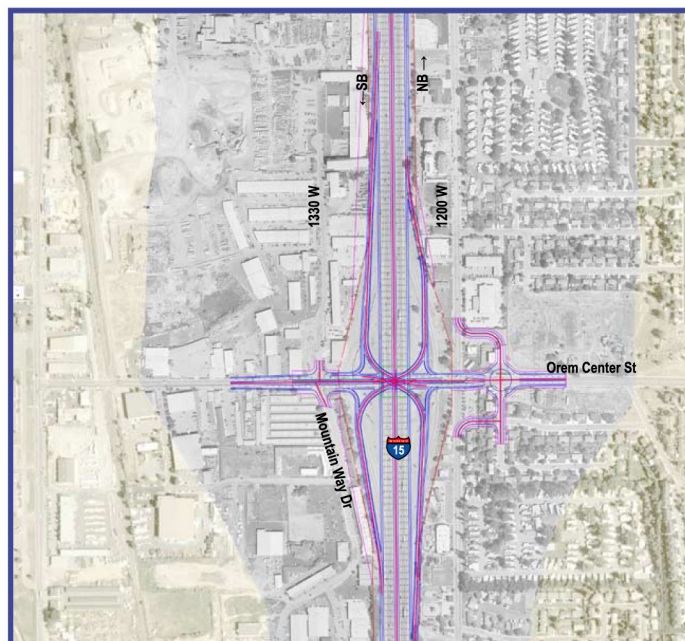
Figure B-30
New Orem 800 South Eliminated Interchange Options



Exit 271 – Orem Center Street



2: Diamond Option with Roundabouts



3: SPUI Option with Roundabout

Exit 272 – Orem 800 North

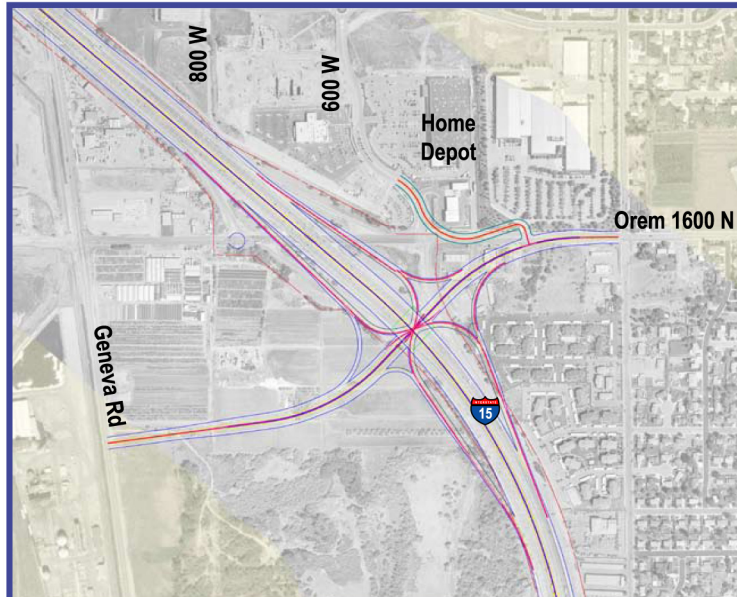


1: Diamond Option

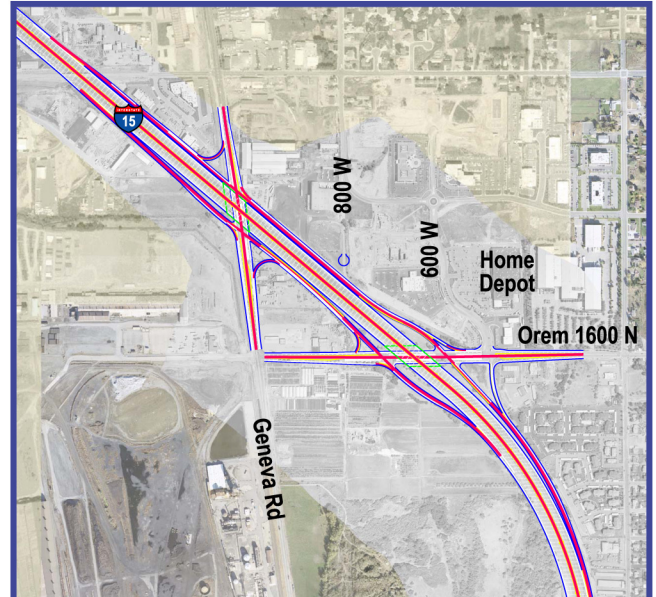
Figure B-31
Orem Center Street and Orem 800 North Eliminated Interchange Options



Exit 273 – Orem 1600 North

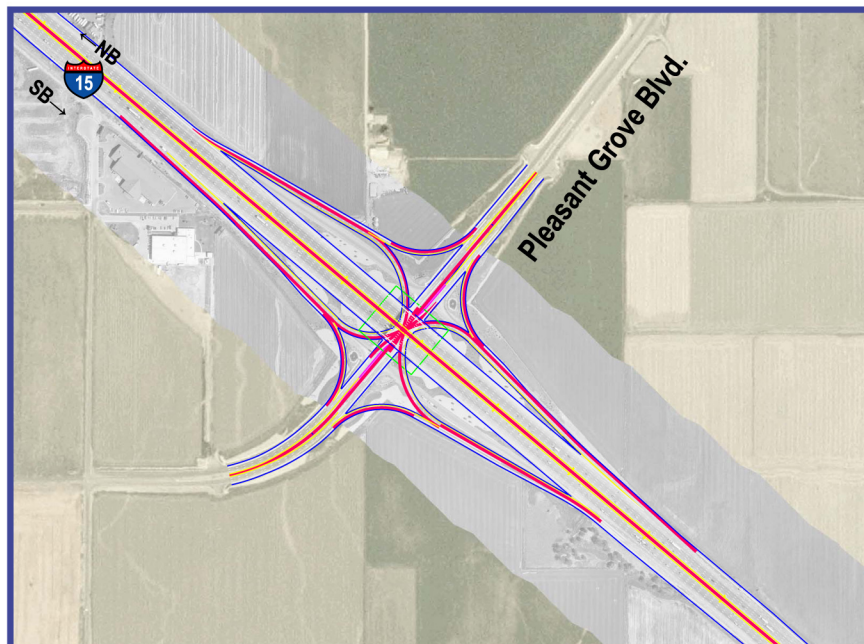


2: SPUI Option



3: Split Diamond Option

Exit 275 – Pleasant Grove



2: SPUI Option

Figure B-32
Orem 1600 North and Pleasant Grove Eliminated Interchange Options



Exit 276 – American Fork 500 East

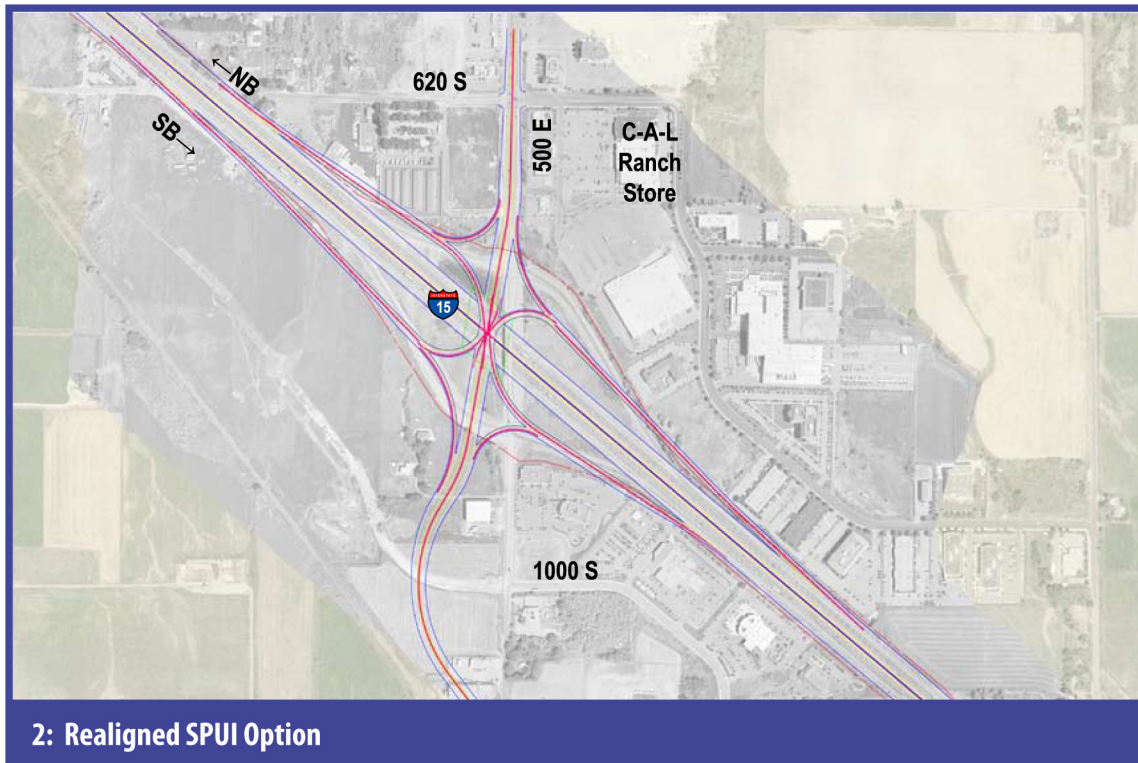
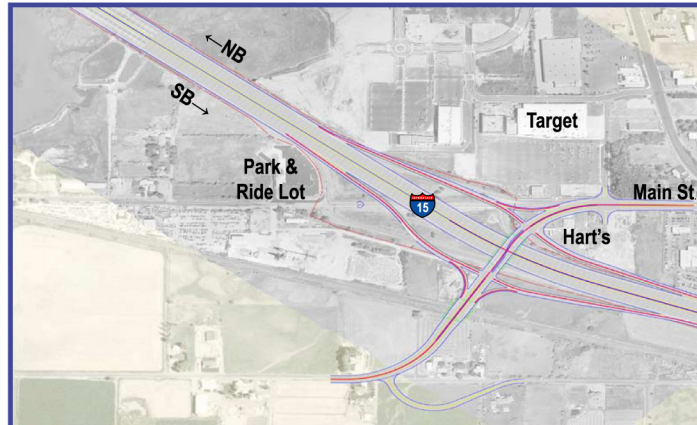


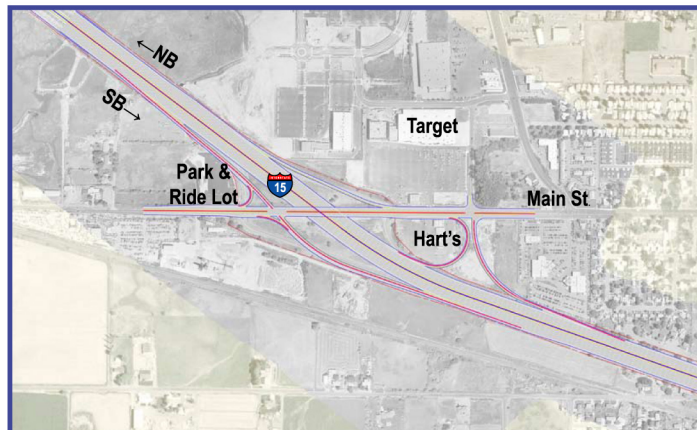
Figure B-33
American Fork 500 East Eliminated Interchange Options



Exit 278 – American Fork Main Street



2: Realigned Diamond Option



4: Trumpet Option

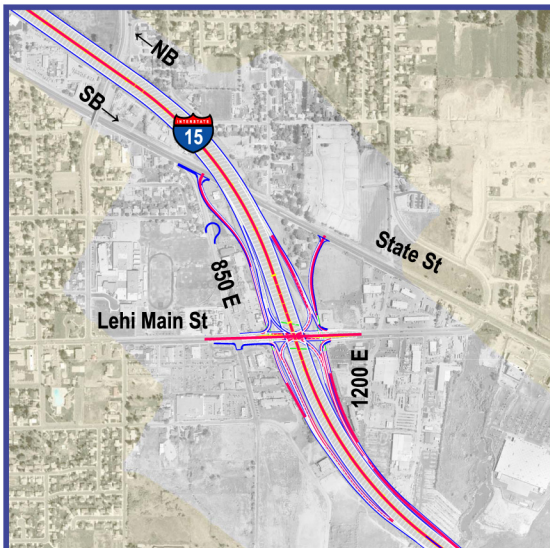


5: Realigned Trumpet Option

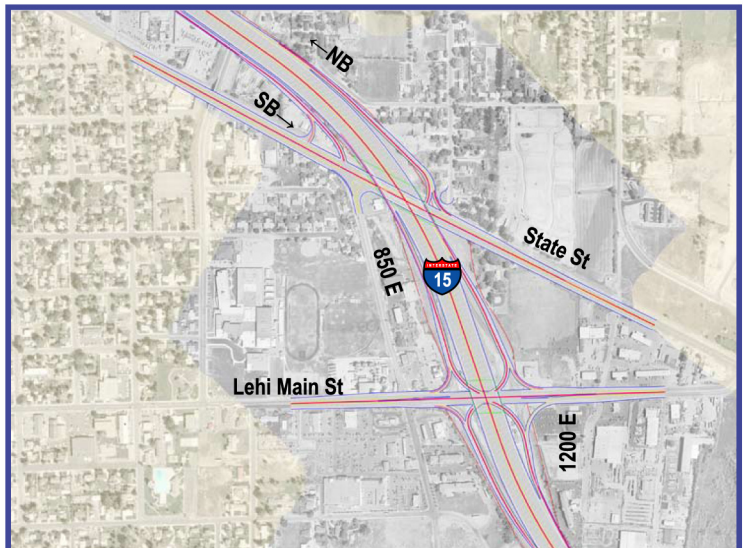
Figure B-34
American Fork Main Street Eliminated Interchange Options



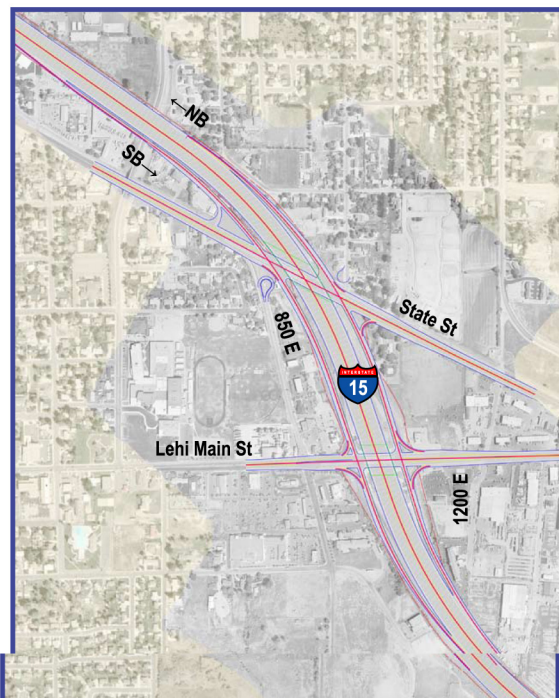
Exit 279 – Lehi Main Street



2: Partial Split Diamond Option 1



3: Partial Split Diamond Option 2



4: Full Split Diamond Option

Figure B-35
Lehi Main Street Eliminated Interchange Options



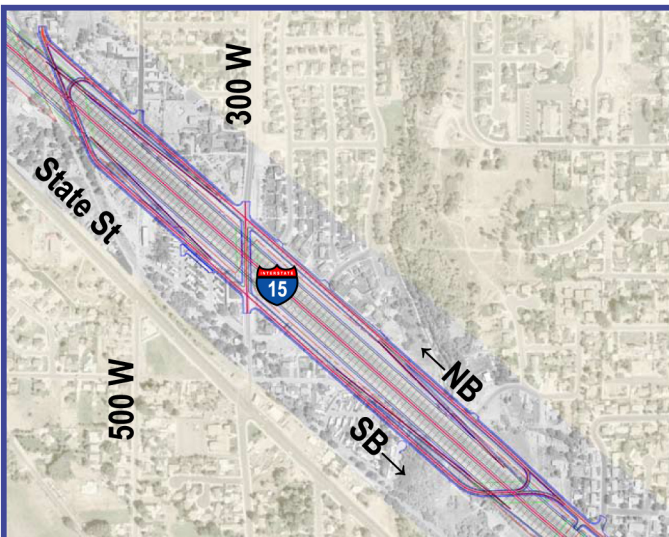
Exit 281– New Lehi 400 West



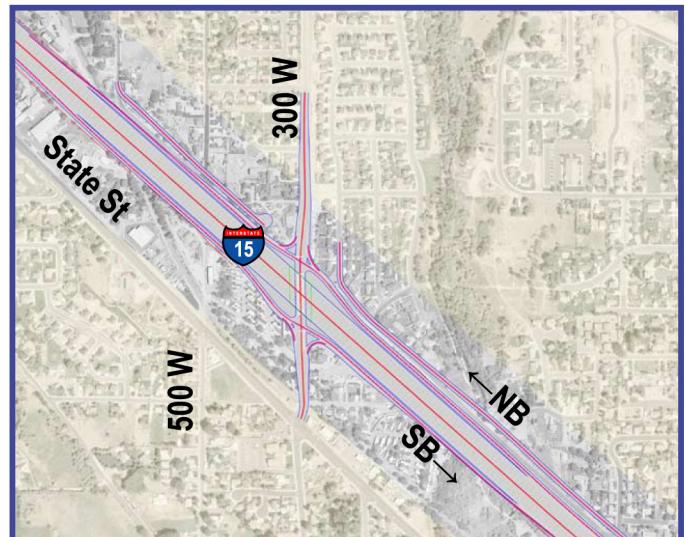
1: Realigned Diamond Option



2: Realigned SPUI Option



3: Couplet Option

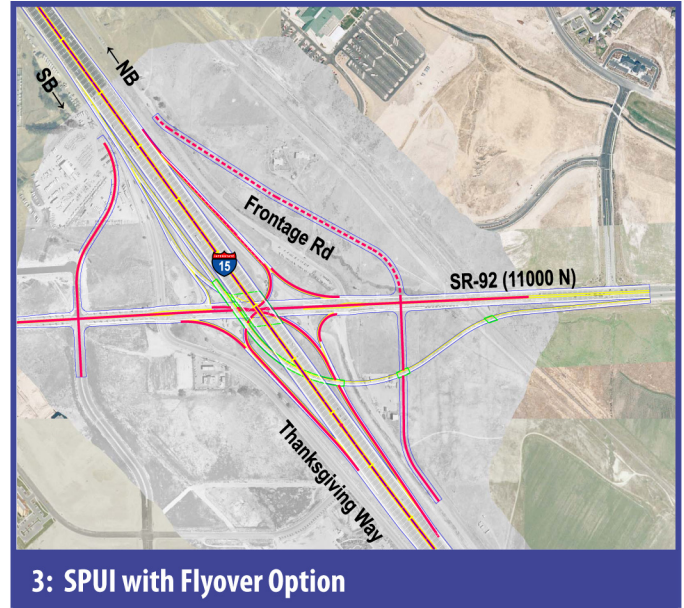


4: Tight Diamond Option

Figure B-36
New Lehi 400 West Eliminated Interchange Options



Exit 284 – Alpine



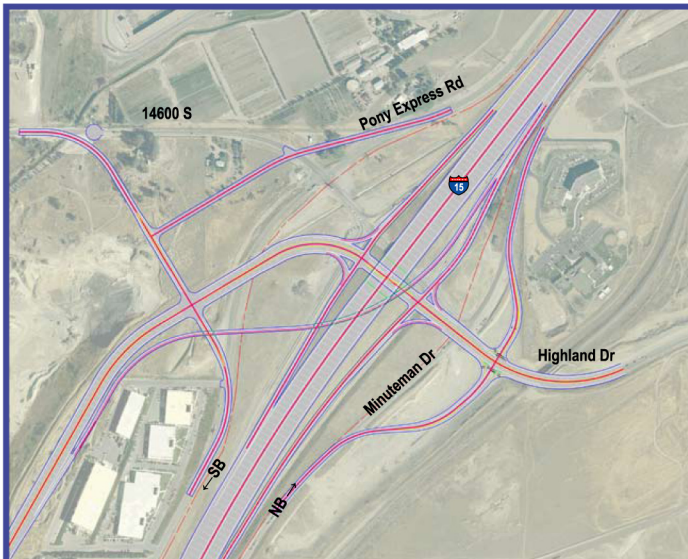
Exit 285 – North Lehi



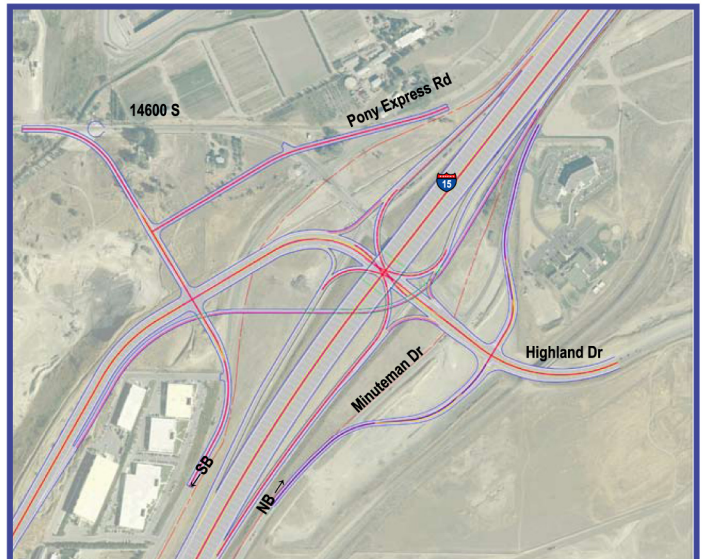
Figure B-37
Alpine and New North Lehi Eliminated Interchange Options



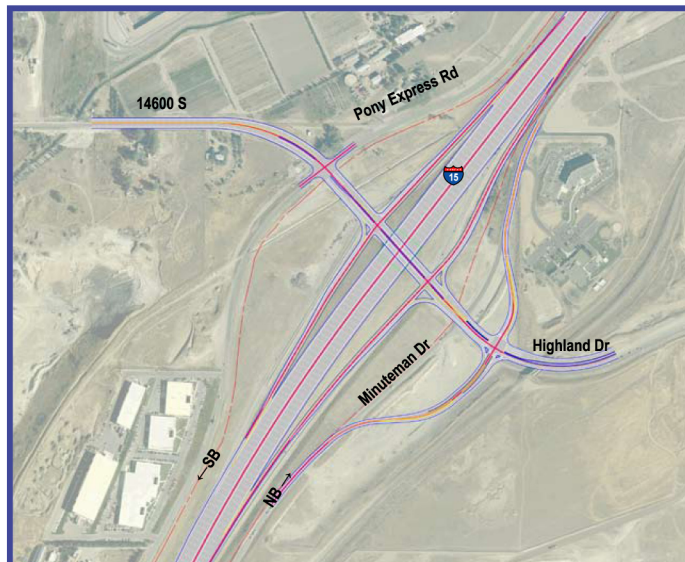
Exit 288 – Bluffdale



1: Diamond with Flyover Option



2: SPUI with Flyover Option



3: Diamond Option

Figure B-38
Bluffdale Eliminated Interchange Options

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